

CATALOGUE OF BIRDS IN THE INDIAN MUSEUM, CALCUTTA.

I. COLUMBAE (PIGEONS AND DOVES).

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I. FOREWORD.

The bird skins in the collection of the Museum of the Asiatic Society¹, which formed the nucleus of the Indian Museum collection of birds, were listed by Edward Blyth in his well known *Catalogue of the Birds in the Museum of the Asiatic Society of Bengal* in 1849. Subsequent to the foundation of the Indian Museum this bird collection grew enormously as a result of the disinterested but devoted labours of a number of distinguished ornithologists in the country; their names are given in the list published by Sclater in his account of the India Museum collection². In addition, a number of skeletons of birds, a small collection of bird eggs, and a few nests, have been added to the collection from time to

¹ All collections in the Museum of the Asiatic Society of Bengal, Calcutta, were formally transferred to the authorities of the newly constituted Indian Museum about 1865, though the building of the Museum was not completed till 1875.

² Sclater, W. L., *Ibis* (6) IV, pp. 69-71 (1892).

time. On the foundation of the Zoological Survey of India in 1916, the bird collection, together with all other collections in the Natural History section, including Ethnology, were transferred to the Director, Zoological Survey of India, and have been under his charge since that date.

The large collection of bird skins, however, remained almost entirely uncatalogued, except for being serially entered in a number of accession registers as the skins were received and identified.

The only published catalogues of this collection are the following :—

- (1) *A List of Birds' Eggs in the Indian Museum, Calcutta.* (Author not given.) 1st edition : 1890. 2nd edition : 1891.
- (2) *A List of Type-specimens in the Indian Museum Collection and a Brief History of the Collections as a whole*, by W. L. Sclater, *Ibis* (6) IV, pp. 69-71 (1892).
- (3) *List of Birds in the Indian Museum*, by F. Finn¹ :
 Part I (1901)—Families : Corvidae, Paradiseidae, Ptilonorhynchidae and Crateropodidae.
 Part II (1905)—Families : Sittidae, Dicruridae, Certhiidae, Regulidae and Sylviidae.

The bird collection in the Indian Museum at present consists of nearly 27,000 registered and a few hundred unregistered skins. Outside workers are naturally handicapped in the study of the Indian birds owing to the absence of any information regarding the collections in the Indian Museum. This is particularly unfortunate, as the Indian Museum collection, in so far as the Indian birds are concerned, is probably only next to the collection in the British Museum both in regard to its size and importance. Unfortunately this state of affairs could not be remedied, as ever since Mr. Frank Finn's retirement from the Indian Museum staff in 1904 no suitably trained officer has been in charge of the Bird Collection. In 1939, Dr. M. L. Roonwal was appointed as a probationer to look after the collections of birds and mammals, and soon after his appointment, it was decided to make a start by preparing an up-to-date catalogue of the collection. The first part of this Catalogue—on Columbæ or Pigeons and Doves, which Dr. Roonwal has prepared—is now issued. Catalogues of the other orders will be prepared and published as and when ready.

The collection of birds in the Indian Museum is, as noted above, fairly large, but it is not fully representative of all the species found in India. Several species are either totally unrepresented, or only a few badly preserved skins are available. I take this opportunity of requesting workers all over the country to help us in filling up the lacunæ in the collection of India's National Museum of Natural History. The desiderata in regard to Pigeons and Doves are listed on pp. 288, 289, but any specimens for increasing the collection and filling up the lacunæ will be very gratefully received.

INDIAN MUSEUM,
 Calcutta ;
 16th June, 1941.

BAINI PRASHAD,
 Director,
 Zoological Survey of India.

¹ Only two parts of the list were published.

II. INTRODUCTION.

(a) *CLASSIFICATION OF THE COLUMBAE.*

Owing to the structural uniformity of the Columbæ, the classification of this order is not easy, and the various schemes of classification suggested have not found general acceptance. Salvadori (1893), after a study of the Pigeons and Doves of the world, introduced the following classification which is, so far, the best available. I have adopted this classification, with such changes in family and subfamily names as are indicated by alterations in generic nomenclature—the new family and subfamily names are given within brackets.

(i) *Salvadori's classification.*

Ord. COLUMBAE.	Fam. (iii) PERISTERIDAE (modern
Subord. I. COLUMBAE.	CLARAVISIDAE).
Fam. (i) TRERONIDAE.	Subfam. 1. ZENAIIDINAE.
Subfam. 1. TRERONINAE.	Subfam. 2. TURTURINAE (now
Subfam. 2. PTILOPODINAE (modern	merged into COLUMBINAE).
PTILINOPINAE).	Subfam. 3. GEOPELIINAE.
Subfam. 3. CARPOPHAGINAE	Subfam. 4. PERISTERINAE (modern
(modern DUCULINAE).	CLARAVISINAE).
Fam. (ii) COLUMBIDAE.	Subfam. 5. PHABINAE.
Subfam. 1. COLUMBINAE.	Subfam. 6. GEOTRYGONINAE.
Subfam. 2. MACROPYGIINAE.	Subfam. 7. CALOENADINAE.
Subfam. 3. ECTOPISTINAE.	Fam. (iv) GOURIDAE.
	Fam. (v) DIDUNCULIDAE.
	Subord. II. DIDI. (Extinct.)

The following new names have to be adopted for the reasons given below :—

Ptilopodinae, based on genus *Ptilopus* Strickland 1841 (not Schönherr 1826), is changed to Ptilinopinae, based on genus *Ptilinopus* Swainson 1825, which replaces *Ptilopus* Strickland. Carpophaginae, based on genus *Carpophaga* Selby 1835, is changed to Duculinae, based on genus *Ducula* Hodgson 1836, which includes *Carpophaga* Selby. Peristeridae and Peristerinae, based on genus *Peristera* Swainson 1827 (not Rafinesque 1815), are changed to Claravisidae and Claravisinae respectively, based on genus *Claravis* Oberholser 1899, which replaces *Peristera* Swainson. Turturinae, based on genus *Turtur* Selby 1835 (not Boddaert 1783) is given up being merged into Columbinae, as *Turtur* Selby, which was the sole genus in the subfamily Turturinae as used by Salvadori, is now merged into the genus *Streptopelia* Bonaparte 1855 belonging to the subfamily Columbinae¹. Also see Peters 1937, for some changes in generic nomenclature.

The revised classification of the Suborder Columbæ as employed in the present Catalogue is given below. Families and subfamilies

¹ The modern genus *Turtur* Boddaert 1783 (= *Chalcopelia* Bonaparte 1855 of Salvadori) belongs to the subfamily Phabinae.

occurring within the Indian limits¹ are marked with a dagger (†), while all those represented in the Indian Museum collection are marked with an asterisk (*).

Subord. *COLUMBAE*.

Fam. (i) *†*TRERONIDAE*.

Subfam. 1. *†*TRERONINAE*.

Subfam. 2. *†*PTILINOPINAE*.

Subfam. 3. *†*DUCULINAE*.

Fam. (ii) *†*COLUMBIDAE*.

Subfam. 1. *†*COLUMBINAE*.

Subfam. 2. *†*MACROPYGIINAE*.

Subfam. 3. *ECTOPISTINAE*.

Fam. (iii) *†*CLARAVISIDAE*.

Subfam. 1. *ZENAIDINAE*.

Subfam. 2. *†*GEOPELIINAE*.

Subfam. 3. *CLARAVISINAE*.

Subfam. 4. *†*PHABINAE*.

Subfam. 5. *†*GEOTRYGONINAE*.

Subfam. 6. †*CALOENADINAE*.

Fam. (iv) *GOURIDAE*.

Fam. (v) *DIDUNCULIDAE*.

(ii) *Other classifications.*

Peters (1937) has combined the Sand-grouse (Suborder Pterocletes) and the Pigeons and Doves (Suborder Columbæ) into the Order Columbiiformes. The Suborder Columbæ is further divided as follows :—

Fam. (i) *RAPHIDAE* (= *DIDI* of Salvadori). Extinct.

Fam. (ii) *COLUMBIDAE*.

Subfam. 1. *TRERONINAE* (= *TRERONIDAE* of Salvadori).

Subfam. 2. *COLUMBINAE* (= *COLUMBIDAE* + *PERISTERIDAE* of Salvadori).

Subfam. 3. *GOURINAE* (= *GOURIDAE* of Salvadori).

Subfam. 4. *DIDUNCULINAE*. (= *DIDUNCULIDAE* of Salvadori).

Peters's Treroninae and Columbinæ are large, unwieldy subfamilies, which it is preferable to divide further according to Salvadori's subdivisions which appear to be both natural and practical.

Stuart Baker (1928, p. 179) had adopted the following grouping for the Indian species :—

Ord. *COLUMBAE*.

Fam. *COLUMBIDAE*.

Subfam. 1. *TRERONINAE*.

Subfam. 2. *GEOPELIINAE*.

Subfam. 3. *DUCULINAE*.

Subfam. 4. *CALOENADINAE*.

Subfam. 5. *PHABINAE*.

Subfam. 6. *COLUMBINAE*.

The comparative importance of the subfamilies is here either over- or under-emphasized as the classification does not take into account extra-Indian subfamilies.

(b) *INDIAN SPECIES OF THE COLUMBAE.*

The home of the Columbæ (Pigeons and Doves, but excluding the Raphidae) is the Indo-Malayan Region where they are found in great abundance and variety; both these features, however, tail off in the Australian Region. The Palaearctic Region (Old World) is poor in Columbæ, and the New World still poorer.

Of the 59 world genera and 841 species and subspecies (including 30 doubtfully distinct and 5 extinct forms) recognised by Peters (1937),

¹ By the term "Indian limits" is meant the following area: The whole of India (politically so known, including Gilgit and the North-West Frontier Province in the north to Cape Comorin in the south, and from British Baluchistan and Indian Mekran in the west to Assam in the east); Burma south to Tenasserim; Ceylon; and the Andamans, the Nicobars and other islands in the Indian Ocean. These are the limits covered by the official *Fauna of British India, Birds*, 2nd ed., Vols. I-VIII (1922-30) by Stuart Baker.

there are represented within the Indian limits 10 genera and 59 species and subspecies—if *Dendrophassa bicincta praetermissa* (Rob. & Kl.) is regarded as distinct from *D. b. bicincta* (Jerd.), the number 59 would be raised to 60. If the genera and forms recognised by Stuart Baker (1928) are accepted, there occur within the Indian limits 18 genera and 62 species and subspecies. The reasons for this difference are given below ; it may be added that Peters is in many cases supported by Ticehurst (1930) who has given reasons for not including certain forms as Indian.

Dendrophassa bicincta praetermissa (Rob. & Kl.).—This subspecies is admitted by Stuart Baker. Peters, however, does not separate it from the typical *bicincta*. I have tentatively accepted *praetermissa* (but *vide* pp. 301-304).

The following three subspecies are regarded by Stuart Baker as occurring within the Indian limits, but Peters does not include India within their range :—*Columba livia livia* Gm., *Streptopelia turtur turtur* (Linn.) and *Streptopelia senegalensis ermanni* (Bonap.).

Chalcophaps indica maxima Hartert.—This subspecies from the Andamans was first recognised in 1931, and is accepted by Peters. Stuart Baker (1928) included the Andaman birds under *C. i. indica* (Linn.).

For the Indian forms I have retained the 18 genera used by Stuart Baker, except *Sphenocercus* G. R. Gray 1840 which is replaced by the earlier *Sphenurus* Swainson 1837. Table 1 below gives a list of Stuart Baker's Indian genera and their equivalent under Peters's nomenclature.

TABLE 1.

Generic names of Indian Columbæ as used by Stuart Baker (1928) and by Peters (1937).

Stuart Baker.	Peters.
1. <i>Crocopus</i> Bonaparte	} Merged into <i>Treron</i> Vieillot.
2. <i>Dendrophassa</i> Gloger	
3. <i>Treron</i> Vieillot ..	} <i>Buteron</i> Bonaparte.
4. <i>Buteron</i> Bonaparte ..	
5. <i>Sphenocercus</i> G. R. Gray (1840) ..	<i>Sphenurus</i> Swainson (1837).
6. <i>Ducula</i> Hodgson	} Merged into <i>Ducula</i> Hodgson.
7. <i>Muscadivora</i> Selby ..	
8. <i>Myristicivora</i> Reichenbach ..	
9. <i>Caloenas</i> G. R. Gray ..	<i>Caloenas</i> G. R. Gray.
10. <i>Chalcophaps</i> Gould ..	<i>Chalcophaps</i> Gould.
11. <i>Columba</i> Linnaeus ..	} Merged into <i>Columba</i> Linnaeus.
12. <i>Alsocomus</i> Blyth ..	
13. <i>Ianthoena</i> Reichenbach ..	
14. <i>Dendrotreron</i> Hodgson ..	
15. <i>Streptopelia</i> Bonaparte ..	{ Merged into <i>Streptopelia</i> Bonaparte.
16. <i>Oenopopelia</i> Blanford ..	
17. <i>Macropygia</i> Swainson ..	<i>Macropygia</i> Swainson.
18. <i>Geopelia</i> Swainson ..	<i>Geopelia</i> Swainson.

The majority of the Indian Columbæ regularly breed within the Indian limits. In a few cases, namely, *Dendrophassa pompadora chloroptera* (Blyth) and *Janthoenas palumboides* (Hume), although the birds most probably breed within the Indian limits, nothing is known of their nidification. *Columba leuconota gradaria* Hartert has as yet been known as breeding only in the region around Gyantse (southern Tibet); no breeding records of it are available within the Indian limits, but it is not unlikely that the bird might be breeding near the borders of Tibet and Yunnan. Similarly, *Geopelia striata striata* (Linnaeus) is so far known to breed in the Malay Peninsula and further south, but no breeding records are available within the Indian limits although the bird occurs in southern Tenasserim; it is not unlikely that a few breeding birds might be found in southern Tenasserim. Of *Streptopelia turtur arenicola* (Hartert) no authentic breeding record within the Indian limits is available. *Butorion capellei* (Temminck) is a straggler in Mergui from the Malay Peninsula, etc., and is not known to breed within the Indian limits. Finally, *Columba evermanni* Bonaparte is only a winter visitor to India and is not known to breed within the Indian limits.

The greater number of the Indian Columbæ are resident and non-migratory although several species do undergo local migrations. The following 10 species and subspecies are migratory (apart from local migrations), some strongly so, others comparatively slightly:—*Sphenurus sphenurus sphenurus* (Vigors), *Myristicivora bicolor* (Scopoli), *Columba leuconota leuconota* Vigors, *Columba leuconota gradaria* Hartert, *Columba evermanni* Bonaparte, *Columba pulchricollis* Blyth, *Dendrotreron hodgsonii* (Vigors), *Streptopelia turtur arenicola* (Hartert), *Streptopelia orientalis orientalis* (Latham) and *Streptopelia orientalis meena* (Sykes).

(c) GENERAL PARTICULARS REGARDING THE COLUMBÆ SKINS IN THE INDIAN MUSEUM.

(i) General.

The Indian Museum collection of the Columbæ consists of some 675 skins of which 520 are of forms occurring within the Indian limits; the remaining 155 are extra-Indian. All of these, with the exception of 20 skins of foreign Columbæ which could not be identified, are included in the present Catalogue. They comprise 28 genera and some 96 species and subspecies. Of these latter, 54 species and subspecies are Indian, 6 (or 7) of a known total of 59 (or 60) being not represented in the collection; and the remainder are foreign.

The skins in the Indian Museum are mostly rather old and represent most of the collection of the Asiatic Society of Bengal which formed the nucleus of the Indian Museum collection. Most of the skins and types listed by Blyth (1849) are available, although some have now become brittle and their colour faded. The donors who largely contributed towards the building up of the Museum's collection of Columbæ are mentioned below:—

E. Blyth (1849, *Catal. Birds Mus. Asiat. Soc. Bengal*); T. C. Jerdon (1848, a few skins from South India); V. Ball (1868, several skins from

Bihar) ; Dr. J. Anderson (some skins from Upper Burma and Western Yunnan collected during the two British Expeditions to Yunnan during 1868 and 1875 and described in 1879 in *Zool. Results Two Yunnan Exped., 1868, 1875* ; also some skins from Tenasserim and the Mergui Archipelago, 1882) ; Capt. (later Major and afterwards Sir O. B.) St. John (1870, some skins from southern Iran) ; Dr. G. Henderson (several skins collected in the Punjab, Kashmir and Eastern Turkestan during Forsyth's First Yarkand Mission of 1870, and described in Henderson & Hume's *Lahore to Yarkand*, 1873) ; W. T. Blanford (an excellent series of skins from Eritrea and Abyssinia collected during the British Abyssinian Expedition of 1867-68, and described in his *Obs. Geol. Zool. Abyssinia*, 1870 ; Blanford also presented some skins from Baluchistan and eastern Iran obtained during the travels of the Persian Boundary Commission, 1870-72, and described in *Eastern Persia*, Vol. II, *Zool. & Geol.*, 1876, by Blanford) ; Dr. F. Stoliczka (a large series of excellently preserved skins from Kashmir and Eastern Turkestan obtained during Forsyth's Second Yarkand Mission of 1873-74 during which Stoliczka lost his life—the results were published by Sharpe in *Sci. Results Second Yarkand Miss. : Aves*, 1881) ; Dr. J. Scully (a fine collection of skins from Eastern Turkestan, especially from the neighbourhood of Yarkand, made in 1874-75, and described by him in *Str. Feath.* IV, pp. 41-205, 1876 ; and a smaller collection from Nepal made in 1878 and described by him in *Str. Feath.* VIII, pp. 339-342, 1879) ; Surgeon J. Armstrong (1878, a large and excellent series of skins from the Konkan Coast, especially Ratnagiri District and the immediately adjoining areas¹) ; Dr. J. E. T. Aitchison (a few skins from the Afghanistan-Iran frontier collected during the travels of the Afghan Boundary Commission of 1885, and described by Sharpe in *Trans. Linn. Soc. Lond.* (2) V pp. 66-93, 1889) ; C. B. Rickett (1890-91, some skins from Foochow in eastern China) ; Lt.-Col. Dr. A. W. Alcock (some skins from the Pamirs, collected during the Pamir Boundary Commission of 1896, and described by him in 1898 in *Rept. Nat. Hist. Results Pamir Bound. Comm.*) ; C. B. Antram (several skins collected in about 1904 or earlier from the Sylhet Division in Assam) ; Dr. S. W. Kemp (a few skins collected in the Abor country in north Assam during the British Abor Expedition of 1911-12, and described by Stuart Baker in *Rec. Ind. Mus.*, VIII, pp. 286, 287, 1913) ; and Dr. S. C. Law (a few skins from Bihar collected in 1927). Apart from these, there are a number of skins from the Trivandrum Museum and

¹ Slater (1892, p. 70) wrongly refers the Armstrong collection to the Malabar Coast. Surgeon J. Armstrong, who belonged to the Marine Survey of India, collected extensively in the Ratnagiri District and adjoining areas (portions of Savantvadi and Kolhapur States) mostly during 1877-1878. An account of his collections, as far as I know, was never fully published, but the collections were deposited in the Indian Museum, Calcutta. The localities from which Armstrong's Columbae skins came are : "Waghotan" (= Vaghotan), "Fanasgaon" (= Phanasgaon) and "Bhoura" or "Bhowra" which is the name given on the labels, but cannot be satisfactorily traced. I have identified it with Bavda (town and taluk) in the Kolhapur State not far from the Ratnagiri District-Kolhapur Frontier. Vidal (1880) in his list of South Konkan birds also utilised Armstrong's list supplied by the latter ; Vidal used the name Bavda which must be the same as "Bhoura" or "Bhowra" used by Armstrong on his labels in the Indian Museum skins. Since the altitude given by Armstrong for "Bhoura" varies from 1,500 to 2,500 feet, he was probably referring to Bavda taluk rather than Bavda town. A report on the entire Armstrong collection of birds is under preparation and will be published in due course.

from the former Riddell Museum (Agra) ; others are labelled as donated by "Mus. Coll. Jaffa" which I cannot locate ; as "Mus. Coll." which means (*vide* Sclater, 1892, p. 71) that they were collected by an official collector of the Indian Museum ; and finally, a few are presentations or exchanges from foreign museums and societies.

(ii) *Type-specimens.*

Sclater (1892, p. 86) had stated that the types of four species, namely, *Crocopus viridifrons* (Blyth), *Crocopus chlorigaster* (Blyth), *Osmotreron chloroptera* (Blyth) and *Macropygia rufipennis* Blyth, are present in the Indian Museum. Besides these four, I have found that the types of two others, namely, *Muscadivora aenea pusilla* (Blyth) and *Streptopelia decaocto stoliczkae* (Hume), are also present. Some of the particulars given by Sclater differ from my conclusions, and are discussed under the species concerned.

The following types are present in the Indian Museum (Table 2) :—

TABLE 2.

Type-specimens of the Columbæ in the Indian Museum, Calcutta.

Name.	Nature of type-specimen.	Discussion on
1. <i>Crocopus phoenicopterus viridifrons</i> (Blyth).	Lectotype ; and one Syntype.	p. 293.
2. <i>Crocopus phoenicopterus chlorigaster</i> (Blyth).	Lectotype ; and two Syn- types.	p. 294.
3. <i>Dendrophassa pompadora chloroptera</i> (Blyth).	Lectotype ; and three Syntypes.	p. 299.
4. <i>Muscadivora aenea pusilla</i> (Blyth)	Holotype ; and one Syn- type.	p. 314.
5. <i>Streptopelia decaocto stoliczkae</i> (Hume)	Holotype ..	p. 354.
6. <i>Macropygia rufipennis</i> Blyth	Lectotype ; and two Syn- types.	p. 343.

(iii) *Indian pigeons and doves unrepresented or poorly represented in the Indian Museum.*

The number indicated within the square brackets gives the number of skins present :—

1. *Dendrophassa pompadora pompadora* (Gmelin)—[Nil].
2. *Dendrophassa fulvicollis fulvicollis* (Wagler)—[Two].
3. *Dendrophassa bicincta leggei* (Hartert)—[One].
4. *Ducula badia badia* (Raffles)—[One].
5. *Ducula badia griseicapilla* Walden—[Two].
6. *Muscadivora aenea aenea* (Linnaeus)—[Two].
7. *Muscadivora aenea insularis* (Blyth)—[Nil].
8. *Columba leuconota gradaria* Hartert—[Nil].

9. *Columba torringtoni* (Bonaparte)—[One].
10. *Columba pulchricollis* Blyth—[Nil].
11. *Janthoenas palumboides* (Hume)—[One].
12. *Streptopelia chinensis forresti* Rothschild—[Nil].
13. *Streptopelia chinensis ceylonensis* (Reichenbach)—[Two].
14. *Streptopelia decaocto xanthocyclus* (Newman)—[One].
15. *Oenopopelia tranquebarica murmensis* Hartert—[Two].
16. *Macropygia ruficeps assimilis* Hume—[Nil].
17. *Chalcophaps indica maxima* (Hartert)—[Two].
18. *Chalcophaps indica robinsoni* Stuart Baker—[Two].

(d) GENERAL REMARKS.

Nomenclature.—In regard to generic and specific nomenclature I have followed Stuart Baker (1928) for the Indian species. Regarding the non-Indian species, I have, as far as possible, followed Peters (1937).

Measurements.—All measurements have been taken on dried museum skins, except in a few cases indicated in the text where the original "fresh" measurements indicated on the labels are given. Doubtful measurements are given within round brackets, while the measurements of juveniles are enclosed within square brackets. The following measurements are given for most skins :—

Wing (W.) : From the bend of the wing to the tip of the longest primary with the quills flattened out.

Tail (Tl.) : From the base of the central tail-feathers to the tip of the longest tail-feather.

Tarsus (Tr.) : From the tarso-metatarsal joint to the metatarso-digital joint (base of the middle toe).

Culmen (C.) : From the base of the exposed culmen, including cere, to the tip. This is the method adopted by Stuart Baker in the *Faun. Brit. Ind., Birds* (2nd ed.) I, 1922. The "culmen" thus measured differs from the "bill" of some writers, the latter measurement being taken from the junction of the bill with the skull to the tip of the bill.

Localities.—The exact determination of the localities as indicated on the labels gave no end of trouble. For, in most cases neither the Province nor the District was mentioned, and the place-names, familiar enough to the collector, are often not to be found in the usual atlases and sometimes not even in the larger maps. In some cases the older spellings of places differ so markedly from the modern ones as to render their being traced in the gazetteers a most intricate task. Wherever possible I have checked the names from the maps and accounts published along with the report of a particular collection. In this way, it is hoped, that most of the localities have been correctly identified. In nearly every case I have given the Province and, where necessary, the District, as demarcated to-day, along with the place-names.

Abbreviations used.—The following abbreviations have been used throughout :

♂, ♀—Male and female respectively in which the sex was *presumably originally determined by an examination of the gonads*, since it is clearly indicated on the original collector's label or in the Indian Museum registers. Many of the older specimens bear the mark ♂ ; this has been.

interpreted as ♂, and in some cases it has been possible to test the accuracy of this interpretation by reference to the plumage of the specimens.

(♂), (♀)—Male and female respectively as determined by an examination of plumage alone. The gonads were not examined for the determination of sex, as is indicated by the absence of sexing on the original collector's labels or in the Indian Museum registers.

C.—Length of culmen.

L.—Total body length.

Reg. No.—Registered number of specimen in the Zoological Survey of India (Indian Museum), Calcutta.

Tl.—Length of tail.

Tr.—Length of tarsus.

W.—Length of wing.

X.—Length, along rhachis, of the white tip of the left outermost tail-feather.

(e) ACKNOWLEDGMENTS.

I am deeply grateful to Dr. Baini Prashad, the Director, for ready advice and help throughout the preparation of this Catalogue and for his kindness in writing the Foreword. To Dr. S. L. Hora and Dr. B. N. Chopra I am indebted for kindly going through a portion of the manuscript and suggesting useful changes. Dr. T. J. Job kindly read through the proofs for which I am indebted to him. Finally, to the late Dr. Claud B. Ticehurst¹ I owe a debt of gratitude for critically reading through the whole manuscript and giving me the benefit of his mature ornithological experience. As a result of his advice the Catalogue has improved in many ways.

Some species and subspecies previously unrepresented in the Indian Museum have recently been acquired for the Museum through the courtesy of the following gentlemen whose assistance is gratefully acknowledged: Dr. P. E. P. Deraniyagala, Director, Colombo Museum, Ceylon; Dr. F. N. Chasen, Director, Raffles Museum, Singapore; and Mr. C. M. Inglis, Curator, Natural History Museum, Darjeeling.

III. SYSTEMATIC ACCOUNT.

(a) INDIAN SPECIES.

The following Indian species and subspecies are listed in the present Catalogue :—

TRERONIDAE.	DENDROPHASSA Glog.
TRERONINAE	<i>D. pompadora</i> (Gmel.), p. 296.
CROCOPUS Bonap.	<i>D. p. phayrei</i> (Bly.), p. 296.
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¹ Dr. Ticehurst died on February 17, 1941.

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- C. indica* (Linn.), p. 345.
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- C. nicobarica* (Linn.), p. 347.
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Family TRERONIDAE.

Subfamily *TRERONINAE*.Genus *Crocopus* Bonaparte.*Crocopus phoenicopterus* (Latham).

The genus *Crocopus* contains a single species, *C. phoenicopterus*, with four subspecies as admitted by Peters (1937, p. 23); of these, three occur within the Indian limits.

Crocopus phoenicopterus phoenicopterus (Latham).

(The Bengal Green Pigeon.)

1790. *Columba phoenicoptera*, Latham, *Index Orn.* II, p. 597, No. 13. (India.)

1849. *Treron (Treron) phoenicoptera*, Blyth, *Catal. Mus. Asiat. Soc. Bengal*, p. 229, No. 1384.

1928. *Crocopus phoenicopterus phoenicopterus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 181. (Latham's type-locality wrongly quoted as "in insula Eimeo".)

1937. *Treron phoenicoptera phoenicoptera*, Peters, *Check-list Birds World* III, p. 23.

Crocopus phoenicopterus phoenicopterus is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26460	♂	Calcutta (vicinity). ..	1842-46 ..	Asiat. Soc. Bengal.	195	123	29	18
26461	♀	Calcutta (vicinity). ..	1842-46 ..	Asiat. Soc. Bengal.	188	..	30	18
3935	♂	Gauhaty (Assam). ..	Mar. 1, 1870	"Mus. Coll."	204	127	32	18
24564	(♂?)	South Sylhet (Assam).	(?)	C. B. Antram.	174	107	27	18
24565	♀	South Sylhet (Assam).	(?)	C. B. Antram.	176	113	29	19
24583	♂	South Sylhet (Assam).	(?)	C. B. Antram.	181	118	26	17.5
26462	♂	(?)	Jan. 7, 1914..	Zool. Gardens, Calcutta.	163	118	27	19
26463	(?)	(?)	Jan. 1, 1914..	Zool. Gardens, Calcutta.	182	113	26	16.5

Remarks.—Nos. 26460 and 26461 were listed by Blyth (1849, p. 229, Nos. 1384*A* and *B* respectively). Nos. 24564 (♂?) and 24565, ♀, both from South Sylhet, Assam, are rather small birds (wing: 174-176 mm.), but another from the same locality is larger. Three Assam birds recorded here, viz., Nos. 24564, 24565 and 3935, distinctly belong to *phoenicopterus*, but No. 24583 from South Sylhet appears to be intermediate between *phoenicopterus* and *viridifrons* as is shown by the upper tail-coverts tending to be grey rather than yellowish olive-green.

Distribution.—"Northern India from the southern base of the Himalayas east to Assam, south to central India, Bengal and southern Assam" (Peters).

***Crocopus phoenicopterus viridifrons* (Blyth).**

(The Burmese Green Pigeon.)

1845. *Treron viridifrons*, Blyth, *Journ. Asiat. Soc. Bengal* XIV, Pt. 2, p. 849.
("Tenasserim provinces" = Mergui, S. Burma, *vide* below.)1849. *Treron (Treron) viridifrons*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 228, No. 1383.1928. *Crocopus phoenicopterus viridifrons*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 183.1937. *Treron phoenicoptera viridifrons*, Peters, *Check-list Birds World* III, p. 23.*Crocopus phoenicopterus viridifrons* is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
22202	♂	Myitkyina (Burma). ..	Mar. 18, 1897	Capt. E. Pottinger.	192	123	30	19
3937	♂	Burma.	1865 ..	Dr. Williams.	184	116	29	18
3938	♂	Burma.	1865 ..	Dr. Williams.	174	114	25	17.5
9086	♂	Tamilone (Upper Burma).	Feb. 6, 1863	Dr. J. Anderson.	188	106	26	19
9087	♀	"Tongine" = Tsagine (Upper Burma).	Dec. 29, 1879	Dr. J. Anderson.	190	107	30	18
23529	♂	Maymyo (Upper Burma).	Nov. 2, 1899	Col. C. T. Bingham.	183	116	28	19
23224	(♀?)	Yatsauk (Shan States).	Jan. 15, 1900	Col. C. T. Bingham.	190	119	27	17
5898	(?)	Arakan (Burma). ..	(?)	"Mus. Coll."	197	124	23	17
26485 (Syn-type).	(?)	Mergui (Tenasserim, Burma).	1846 ..	Rev. J. Barbe (Asiat. Soc. Bengal).	180	115	(36)	19
26486 (Lecto-type).	(?)	Mergui (Tenasserim, Burma).	1846 ..	Rev. J. Barbe (Asiat. Soc. Bengal).	185	109	28	19

Remarks.—Nos. 26485 and 26486 bear identical labels as follows : "Type No. 1383, *Crocopus viridifrons* Blyth, Mergui, Rev. J. Barbe, 1846, A.S.B." On the outer paper wrapper of each specimen is also written : "Type of sp." They are thus the two specimens recorded by Blyth (1849, p. 228, No. 1383, *A*, *B*). Presumably, Blyth (1845, p. 849) originally described his bird from one of these specimens. Since it is not possible to determine which of these two specimens is Blyth's type, they must be regarded as the Syntypes ; of these, I select the better preserved specimen, No. 26486, as the Lectotype.

Type-locality.—Blyth (1845, p. 849) had stated that his birds came from the "Tenasserim provinces", which in those days included a considerable portion of Burma from about 19°N. to 10°N. latitudes. Since Blyth's birds actually came from Mergui, this place becomes the type-locality. It may be added that there seem to be no other records from as far south as Mergui—Oates's (1883, p. 307) southern limit was Moulmein, while Hume (1888, p. 290) gave it as northern and central Tenasserim.

Distribution.—"Burma, northern Tenasserim and northwestern Siam" (Peters).

Crocopus phoenicopterus chlorigaster (Blyth)¹.

(The Southern Green Pigeon.)

1843. *Vinago chlorigaster*, Blyth, *Journ. Asiat. Soc. Bengal* XII, Pt. 1, p. 167, foot-note. (No locality=Southern India by Blyth, *Ann. Mag. Nat. Hist.* XIV, p. 116, 1844: restricted to Salem District, Madras Presidency, by Whistler & Kinnear, *Journ. Bombay Nat. Hist. Soc.* XXXVIII, p. 672, 1936.)
1849. *Treron (Treron) chlorigaster*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 229, No. 1385.
1928. *Crocopus phoenicopterus chlorogaster*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 184.
1937. *Treron phoenicoptera chlorigaster*, Peters, *Check-list Birds World* III, p. 23.

Crocopus phoenicopterus chlorigaster is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
3939	♂	Cawnpore (U. P.). ..	Dec. 28, 1869	E. Buck. ..	185	(120)	27	18
3940	♂	Cawnpore (U. P.). ..	Oct. 25, 1869	E. Buck. ..	185	129	33	18
3941	♂	Cawnpore (U. P.). ..	Oct. 25, 1869	E. Buck. ..	187	129	29	17
3943	♂	Cawnpore (U. P.). ..	Oct. 25, 1869	E. Buck. ..	188	121	30	18
3944	♂	Cawnpore (U. P.). ..	Oct. 25, 1869	E. Buck. ..	176	113	23	19
3945	♀	Cawnpore (U. P.). ..	Oct. 25, 1869	E. Buck. ..	172	107	(32)	18
3942	(?)	Cawnpore (U. P.). ..	(?)	E. Buck. ..	185	107	30	16
3959	♂	Agra (U. P.). ..	Mar. 1868 ..	"Riddell Mus."	185	118	30	16
3958	♀ (Juv.)	Agra (U. P.). ..	Mar. 1868 ..	"Riddell Mus."	[182	122	26.5	18]
3955	♂	Bind(a)ra (C. P.). ..	(?)	Mr. W. T. Blanford.	167	119	28.5	19.5
3961	(?)	N. E. Chanda (C. P.).	Feb. 7, 1869	Mr. W. T. Blanford.	190	..	30	17.5
3954	(?)	Nagpur (C. P.). ..	(?)	Mr. W. T. Blanford.	192	125	28	17.5
3960	♂	S. E. Berar. ..	Mar. 1870 ..	Mr. W. T. Blanford.	177	108	28	17
3951	♂	Udipur (west Chota Nagpur, C. P.).	Jan. 4, 1870..	Mr. W. T. Blanford.	187	121	27	17.5
3952	♀	Chota Nagpur. ..	Nov. 29, 1868	Mr. V. Ball.	178	107	27	18
3950	(?)	Chota Nagpur. ..	Dec. 9, 1868	Mr. V. Ball.	187	119	26	(18)
26464	♂	Burkul Is. (Chilka Lake, Orissa).	July 1914 ..	Dr. S. W. Kemp.	181	120	25	17
25744	♀	Near Ramgarh (Ranchi Dist., Bihar).	Oct. 18, 1927	Dr. S. C. Law.	187	(111)	27	17
3946	♀	Manbhum (Bihar). ..	Jan. 1865 ..	Lt. R. C. Beavan.	179	110	26	19
3948	(?)	Manbhum (Bihar). ..	(?)	Lt. R. C. Beavan.	190	117	26	19.5
3947	(?)	Manbhum (Bihar). ..	Feb. 1865 ..	Lt. R. C. Beavan.	177	105	26	16.5

¹ The original spelling is *chlorigaster*. Several writers, including Stuart Baker (1928, p. 184), have wrongly used *chlorogaster*.

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
3949	♀ (Juv.)	Manbhum (Bihar). ..	(?)	"Mus. Coll."	[183	117	27	17]
3932	(?)	Manbhum (Bihar). ..	(?)	"Mus. Coll."	196	125	28	..
3931	(?)	Singhbhum (Bihar). ..	(?)	Mr. V. Ball.	185	110	27	16
3956	(?)	Singhbhum (Bihar). ..	Dec. 10, 1868	Mr. V. Ball.	187	(120)	28	17
3933	(?)	Daminiok (Bihar ?). ..	(?)	Mr. V. Ball.	187	118	30	20
3930	(?)	Daminiok (Bihar ?). ..	(?)	Mr. V. Ball.	183	114	29	16.5
3934	(?)	Daminiok (Bihar ?). ..	(?)	Mr. V. Ball.	187	123	28	18
25767 (Mounted in gallery.)	♂	"Palamau border" (Ranchi Dist., Bihar).	Oct. 23, 1927	Dr. S. C. Law.	196	(126)	..	19
11828	♂	Fanasgaon (=Phanasgaon, Ratnagiri Dist., Bombay Pres.).	Mar. 15, 1878	Surg. J. Armstrong.	194	123	29	18.5
11829	♀	Fanasgaon (=Phanasgaon, Ratnagiri Dist., Bombay Pres.).	Mar. 17, 1878	Surg. J. Armstrong.	175	109	28	17
11830	♀	"Bhoura" (=Bavda, 2,000 ft., Kolhapur State, Bombay Pres.).	Feb. 12, 1878	Surg. J. Armstrong.	184	122	27	17
18443	♂	N. Bangalore (Mysore State).	(?)	"Mus. Coll."	183	122	26	17
18547	♀	N. Bangalore (Mysore State).	(?)	"Mus. Coll."	179	110	27	..
18514	♂	S. Arcot Dist. (Madras Pres.).	(?)	"Mus. Coll."	175	101	26	17
18515	♂	S. Arcot Dist. (Madras Pres.).	(?)	"Mus. Coll."	172	99	27	18
18516	♀	S. Arcot Dist. (Madras Pres.).	(?)	"Mus. Coll."	174	(110)	25	16
26482 (Lectotype).	(?)	(?)	(?)	Asiat. Soc. Bengal.	197	130	30	18
26483 (Syn-type).	(?)	(?)	(?)	Asiat. Soc. Bengal.	170	118	..	18
26484 (Syn-type).	(?)	(?)	(?)	Asiat. Soc. Bengal.	182	114	..	19

Remarks.—Nos. 26482, 26483 and 26484 bear identical labels : "Type No. 1385. *Crocopus chlorigaster* Blyth. No further history. A. S. B." Two of the specimens bear, in addition, the following particulars : "Blyth, J. A. S. XII, p. 167. S. India ; rare in Bengal." On the paper wrapper of each of the three specimens is written, among other notes, the following : "One of these is type." No doubt, these are the three specimens which were listed by Blyth (1849, p. 229, No. 1385, A, B, C). A and B are males, while C, "from the vicinity of Calcutta 1841-6", is female. It was presumably from one of these three specimens that Blyth (1843, p. 167) originally described this bird ; since Blyth's original specimen was a female, it was presumably No. 1385C of his *Catalogue*, but A and B cannot be placed, so that it is not possible to say which of the three Indian Museum specimens is No. 1385C

Under these circumstances, I regard the three Indian Museum specimens as the Syntypes of the species, and select the best preserved specimen, No. 26482, as its Lectotype.

Sclater (1892, p. 86) listed only one type-specimen of *chorigaster*, with the locality "Near Calcutta" and the donor "E. Blyth". I find nothing, either on the labels or on the outer wrappers of the skins, to support Sclater. Again, he wrongly gave Blyth's name as *Treron chorigaster* instead of *Vinago chorigaster*.

From the specimens in the Indian Museum, the following is indicated:—Specimens from Cawnpore and Agra in the United Provinces are intermediate in plumage between *chorigaster* and *phoenicopterus*. While their breast and abdomen are yellowish as in true *chorigaster*, there is a more or less clear basal band of yellowish-green on the tail. Only in one specimen (No. 3941, ♂, Cawnpore) is the tail ashy throughout as in *chorigaster*.

Similarly, in respect of tail-coloration, specimens from southern Bihar (Singhbhum, Manbhum, Ranchi and ?Daminik) and Orissa (Chilka Lake), are intermediate between *chorigaster* and *phoenicopterus*.

Discussing its distribution in the Eastern Ghats (Madras Presidency), Whistler & Kinnear (1936, p. 672) state that specimens from the Madras Presidency appear to be smaller than those from the central belt of the Indian peninsula (wing 182-184 mm., as against 203 mm.). Birds from the Ratnagiri District (Bombay Presidency), Bangalore and Arcot in the Indian Museum collection, however, are not appreciably smaller than North Indian birds as shown below:—

Wing (mm.).	
<i>N. India</i> (down to 18° N. lat.).	<i>S. India</i> (below 18° N. lat.).
10♂♂ : 167-188	4♂♂ : 172-194
4♀♀ : 172-187	4♀♀ : 174-184
6 o? : 177-196	3 o? : 170-197

Distribution.—"All of the Indian Peninsula south of the range of *p. phoenicoptera*; Ceylon" (Peters).

Genus **Dendrophassa** Gloger.

Dendrophassa pompadora (Gmelin).

The species extends from Ceylon and India *via* Siam (not Malaya) and Cochin China to the Philippines and the East Indies. Peters (1937, pp. 15-17) recognises seventeen subspecies of which four occur within the Indian limits.

Dendrophassa pompadora phayrei (Blyth).

(The Ashy-headed Green Pigeon.)

1849. *Treron* (*Treron*) *malabarica* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 229, No. 1389.
 1862. *Osmotreron Phayrei*, Blyth, *Journ. Asiat. Soc. Bengal* XXXI, p. 344. (Toung-hoo, Burma.)
 1928. *Dendrophassa pompadora phayrei*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 186.
 1937. *Treron pompadora phayrei*, Peters, *Check-list Birds World* III, p. 16,

Dendrophassa pompadora phayrei is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
24581	♂	S. Sylhet (Assam).	(?)	C. B. Antram.	149	83	23	15
5801	♀	Lamagooting (Assam).	(?)	Capt. Butler.	153	102	23	14
5897	♂	Arakan (W. Burma).	(?)	"Mus. Coll."	151	101	25	14
26451	♂	Arakan (W. Burma).	1843	Capt. J. R. Abbott.	147	92	25	16
26452	♂	Arakan (W. Burma).	1843	Capt. J. R. Abbott.	150	95	26	14
5896	♀	Arakan (W. Burma).	(?)	"Mus. Coll."	150	96	23	16
8135	♀	Meetan (Tenasserim, Burma).	Jan. 18, 1877	Dr. J. Anderson (Tenasserim Exped.).	143	90	22	16
8134	♂	Meetan (Tenasserim, Burma).	Feb. 8, 1877	Dr. J. Anderson (Tenasserim Exped.).	152	93	20	14
24227	♂	(?)	July 15, 1902	(?)	140	88	22	17

Remarks.—Nos. 26451 and 26452 were listed by Blyth (1849, pp. 229, 230, No. 1389 *A*, *B* respectively). The specimens are in poor condition and the plumage is faded, but they can clearly be distinguished from *D. p. affinis* by the ashy patch on the crown and the remnants of the orange patch on the forebreast.

Distribution.—"Bengal eastward through Assam to Laos, south to Calcutta, Tenasserim, continental Siam and Cochinchina" (Peters).

***Dendrophassa pompadora affinis* (Jerdon).**

(The Grey-fronted Green Pigeon.)

1840. *Vinago affinis* (♀), Jerdon, *Madras Journ. Lit. & Sci.* XII, p. 13. (West coast of Indian Peninsula.)

1845. *Vinago malabarica* (♂), Jerdon, *Illustr. Ind. Orn.* III, letterpress to pl. 21.

1849. *Treron (Treron) malabarica* (part), *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 229, No. 1389.

1928. *Dendrophassa pompadora affinis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 188.

1937. *Treron pompadora affinis*, Peters, *Check-list Birds World* III, p. 15.

Dendrophassa pompadora affinis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
11832	♂	"Bhoura" (= Bavda), 2,000 ft., Kolhapur State, Bombay Pres.	Mar. 28, 1878	Surg. J. Armstrong.	142	105	23	14
26449	♂	"Bhoura" (= Bavda), 2,500 ft.	Mar. 28, 1878	Surg. J. Armstrong.	147	101	22	15

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
11038	♂	"Bhoura" (=Bavda), 2,500 ft.	Mar. 28, 1878	Surg. J. Armstrong.	142	102	21	15
11831	♂	"Bhoura" (=Bavda), 2,000 ft.	Mar. 30, 1878	Surg. J. Armstrong.	140	101	23.5	16
11834	♂	"Bhoura" (=Bavda), 2,000 ft.	Apr. 14, 1878	Surg. J. Armstrong.	142	101	23	..
11146	♂ (Juv.)	"Bhoura" (=Bavda), 2,500 ft.	Mar. 29, 1878	Surg. J. Armstrong.	[135	82	23	19]
11323	♀	"Bhoura" (=Bavda), 2,000 ft.	Mar. 28, 1878	Surg. J. Armstrong.	143	92	20	13
11039	♀	"Bhoura" (=Bavda), 2,500 ft.	Mar. 28, 1878	Surg. J. Armstrong.	149	98	25	13
11325	♀	"Bhoura" (=Bavda).	Mar. 28, 1878	Surg. J. Armstrong.	141	85	22	14
11833	♀	"Bhoura" (=Bavda), 2,000 ft.	Apr. 6, 1878	Surg. J. Armstrong.	145	102	21	13
11835	♀	"Bhoura" (=Bavda), 2,500 ft.	Apr. 10, 1878	Surg. J. Armstrong.	139	92	23	12
11326	♀ (Juv.)	"Bhoura" (=Bavda), 2,000 ft.	Apr. 18, 1878	Surg. J. Armstrong.	[134	80	22	15]
11088	♀ (Juv.)	"Bhoura" (=Bavda), 2,500 ft.	Mar. 29, 1878	Surg. J. Armstrong.	[139	79	21	18]
18120	♂	Shevaroy Hills (Madras Pres.).	(?)	W. Daly.	146	96	21.5	16
23928	(♂)	Ponmudi (Travancore).	April 1895	Trivandrum Mus.	139	97	21	15

Remarks.—No. 11146, ♂ (juv.), has no maroon on the back and is indistinguishable from the juvenile females, Nos. 11326 and 11088. No. 11326 is labelled only as "♀"; because of its small size and the condition of the feathers of the back I consider it as juvenile.

The males and females of *D. p. affinis* are very similar in appearance and size to those of *D. p. phayrei*, but the former subspecies can be distinguished from the latter by the following characters:—(1) In *affinis* the ashy patch on the crown, forehead and foreneck is less pure (being mixed with an olive-green tinge) and gradually merges into the olive-green of the hindneck and back instead of being more or less sharply defined as in *phayrei*. (2) The complete absence in *affinis* of the orange patch of the forebreast which is present, though sometimes very faint or even absent, in *phayrei*. (3) The maroon-chestnut of the back is darker (having almost a purplish tinge) in *affinis* than in *phayrei*. (4) A fourth point in which the two subspecies differ needs mention. Stuart Baker (1928, p. 185) mentions in the key to the species of *Dendrophassa* that all the Indian subspecies of *D. pompadora* have the "tibial plumes in both sexes buff or yellowish". The series of skins in the Indian Museum, however, shows the following characters:—

D. pompadora affinis.—Tibial plumes deep lemon-yellow in ♂, but generally white (sometimes faintly lemon yellow mixed with white) in ♀.

D. pompadora phayrei.—Tibial plumes white in both the sexes.

Distribution.—"Western India from Bombay to southern Travancore" (Peters).

***Dendrophassa pompadora chloroptera* (Blyth).**(The Nicobar Green Pigeon)¹.

1845. *Treron chloroptera*, Blyth, *Journ. Asiat. Soc. Bengal* XIV, p. 852.
(Nicobar Islands.)
1849. *Treron (Treron) chloroptera*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*,
p. 229; No. 1388.
1903. *Osmotreron chloroptera andamanica*, Richmond, *Proc. U. S. Nation. Mus.*
XXV, p. 308.
1928. *Dendrophassa pompadora chloroptera*, Stuart Baker, *Faun. Brit. Ind.,*
Birds (2nd ed.) V, p. 188.
1937. *Treron pompadora chloroptera*, Peters, *Check-list Birds World* III, p. 16.

Dendrophassa pompadora chloroptera is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
25924	♂	Bonnington (N. Andaman Is.).	Feb. 17, 1930	Zool. Survey of India.	171	107	26	18
25925	♀	Bonnington (N. Andaman Is.).	Feb. 17, 1930	Zool. Survey of India.	175	108	28	19
18667	♀	Anikhet (S. Andaman Is.).	Mar. 13, 1890	G. H. Booley	170	101	27	17.5
3918	♂	Andamans. ..	(?)	Dr. G. E. Dobson	170	(95)	23	..
26487 (Lecto-type).	(♂)	Nicobars.	1845	Rev. J. Barbe (Asiat. Soc. Bengal).	178	111	(31)	19
26488 (Syn-type).	(♂)	Nicobars.	1845	Capt. Lewis & Rev. J. Barbe (Asiat. Soc. Bengal).	167	98	..	17
26489 (Syn-type).	(♀)	Nicobars.	1845	Capt. Lewis & Rev. J. Barbe (Asiat. Soc. Bengal).	173	104	..	(20)
26490 (Syn-type).	(♀)	Nicobars.	1845	Capt. Lewis & Rev. J. Barbe (Asiat. Soc. Bengal).	170	105	29	..

Remarks.—Nos. 26488 (♂), 26489 (♀) and 26490 (♀) bear the labels : “Type No. 1388, *Treron chloroptera* Blyth, A, B & C, Nicobars, Capt. Lewis & Rev. J. Barbe, 1845, A. S. B.” No. 26487 (♂) is similarly labelled except that only one collector’s name (Rev. J. Barbe) is given, and the letters “A, B, & C” are not given. On the outer paper wrapper of each specimen is also written : “Type of sp. Bly” no doubt meaning ‘Type of species of Blyth’ The three specimens recorded by Blyth (1849, p. 229, No. 1388, A, B, C) most probably form part of the series of four specimens mentioned above ; Blyth records : A ♂ and B ♀ collected by Capt. Lewis, and C ♂ by Rev. J. Barbe, all obtained from the Nicobars in 1845. Presumably, it was from one of these four specimens that Blyth (1845, p. 852) described the species. I have taken the four specimens mentioned above as the Syntypes. Of these,

¹ This name is preferable to “Andaman Green Pigeon” employed by Stuart Baker (1928, p. 188) because (i) the type-locality is Nicobars, not Andamans ; and (ii) more than one race is recognised by some authors in the Andamans and the Nicobars.

No. 26487 (♂, Rev. J. Barbe) is presumably the same as Blyth's specimen (No. 1388 C, ♂, Rev. J. Barbe), and since this is also the better preserved of the two males, I select it as the Lectotype.

There has been much diversity of opinion regarding the number of races occurring in the Andaman and the Nicobar groups of islands. Hume (1874, p. 258) regarded the Nicobar birds as somewhat different from the Andaman birds, but did not consider the differences sufficiently marked for the separation of the races. Richmond (1903, p. 308) described S. Andaman birds as much smaller and darker than the Nicobar birds, but according to Stuart Baker (1928, p. 188) no such distinction holds good in a series.

Andaman and Nicobar birds in the Indian Museum collection cannot be separated as regards measurements as shown below :—

					Wing (mm.)	Tail (mm.)
Andamans	2♂♂	..	..	..	170-171	(95)-107
	2♀♀	..	..	..	170-175	101-108
Nico bars	2 ♂♂	..	..		167-178	98-111
	2 ♀♀	..	..	..	170-173	104-105

No. 3918, ♂, Andamans, differs from the other specimens in being comparatively small and also much darker throughout; the lower plumage shows some brownish tinge on the lower breast.

Distribution.—"Nicobar and Andaman Islands" (Peters).

***Dendrophassa fulvicollis* (Wagler).**

This species extends from Tenasserim (S. Burma) in the west, through Malaya and French Indo-China, to some of the islands in the East Indies, viz., Sumatra, Borneo, Billiton, etc. Peters (1937, pp. 17, 18) recognises four subspecies of which only *D. f. fulvicollis* occurs within the Indian limits.

***Dendrophassa fulvicollis* ?*fulvicollis* (Wagler).**

(The Cinnamon-headed Green Pigeon.)

1827. *Columba fulvicollis*, Wagler, *Syst. Av., Columba*, sp. 8. (Java=Sumatra.)

1928. *Dendrophassa fulvicollis fulvicollis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 189.

1937. *Treron fulvicollis fulvicollis*, Peters, *Check-list Birds World III*, p. 17.

Dendrophassa fulvicollis ?*fulvicollis* is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26417	♂	Kuching (Sarawak, Borneo).	Nov. 23, 1896	Sarawak Mus. (Borneo).	143	103	22	15
26448	(♂)	(?)	(?)	(?)	146	93	23	13

Remarks.—Having had no opportunity of comparing the two specimens here recorded with other subspecies of *D. fulvicollis*, I have placed them under *D. f. fulvicollis* on distributional grounds only. No. 26447 is from south-western Borneo and, therefore, may perhaps not be referred to *D. f. barmensis* which occurs only in northern Borneo. No. 26448 (no history) appears to be an old specimen and is hardly distinguishable from No. 26447.

Distribution.—"Tenasserim south through the Malay States and Malay Archipelago to Sumatra ; Rhio Archipelago ; southern Borneo ; islands of Billiton and Banka ; Cochinchina (?)" (Peters).

According to Delacour and Jabouille (1931, p. 12 ; 1940, p. 114) it occurs sparingly in French Indo-China and Cochin China.

***Dendrophassa bicincta* (Jerdon).**

The species extends from the United Provinces (India) in the west and Ceylon in the south, and *via* the Malay Peninsula, Siam, and Indo-China to the Island of Hainan in the north-east, and to Java and the Island of Sao Thome and Rollas islet in the Gulf of Guinea in the east. It is not recorded from the intermediate islands of the East Indies. Peters (1937, pp. 19, 20) recognises four subspecies, namely, *bicincta*, *leggei*, *domvilii* and *javana*, of which the first two occur within the Indian limits. The subspecies *praetermissa* Robinson & Kloss, which is accepted by Stuart Baker (1928, p. 193), is united with *bicincta* by Peters. Although *praetermissa* is very difficult to distinguish from *bicincta*, and no satisfactory distinguishing characters have yet been given, I have tentatively accepted it as distinct and referred to it all the specimens from the range as defined by Stuart Baker (1928).

I have found it quite impossible to distinguish individual specimens of the races *bicincta*, *leggei* and *praetermissa* on plumage characters, while size differences in small collections are of little help.

Inglis (1927, p. 47) has recorded *D. b. domvilii* (Swinhoe) from the Bengal Duars ! This is presumably due to wrong identification of *D. b. bicincta*, as *domvilii* occurs only in the Island of Hainan off the coast of S. E. China.

***Dendrophassa bicincta bicincta* (Jerdon).**

(The Indian Orange-breasted Green Pigeon.)

1840. *Vinago bicincta* (♂), Jerdon, *Madras Journ. Lit. & Sci.* XII, p. 13, No. 289. (Sea-coast south of Tellichery, Madras Presidency.)

1849. *Treron (Treron) bicincta* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 229, No. 1386.

1928. *Dendrophassa bicincta bicincta*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 191.

1937. *Treron bicincta bicincta* (part), Peters, *Check-list Birds World III*, p. 19.

Dendrophassa bicincta bicincta is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
2921	(♀)	Travancore.	(?)	Asiat. Soc. Bengal.	156	99	24	15
18399	♀	S. Mangalore (Madras Pres.).	(?)	Dr. J. Scully.	157	100	25	16
3923	♂	Manbhum (Bihar).	Dec. 16, 1864	Lt. R. C. Beavan.	151	95	24	17
26521	♂	Midnapore Dist. (Bengal).	Nov. 25, 1938	Mr. A. E. F. Wood.	148	108	23	15.5

Remarks.—No. 2921 from Travancore is sexed as a “♂” = ♂, but has the plumage of a ♀. No. 26521, ♂, Midnapore District, Lower Bengal, is an exceptionally small specimen, with wing 148 mm. only; in this respect it resembles the Ceylon race *leggei*. A ♂ (No. 3923) from Manbhum (Bihar) is also rather small, with wing only 151 mm. The wing-length given by Stuart Baker (1928, pp. 191-193) for males of *D. b. bicincta* is 153-164 mm., once 170 mm.; and for *leggei* 140-146 mm., once 149 mm.

The length of the culmen is given by Stuart Baker (*loc. cit.*) as 12-13 mm.; in the Indian Museum birds it is 15-17 mm.

Distribution.—Peters (1937, p. 19) does not separate *praetermissa* from the typical *bicincta*, as was done by Stuart Baker (1928, p. 192). The latter gives the following range of *D. b. bicincta* :—Malabar Coast, perhaps excluding Travancore; North India from the United Provinces along the Terai through foot hills and adjoining plains to east Assam north of the Brāhmaputra; Bengal and Bihar, but replaced in the extreme east, *i.e.*, Assam south of the Brahmaputra, Comilla and Chittagong, by the closely allied and hardly distinguishable race *praetermissa*; rare (probably only a winter visitor) in Chota Nagpur; more common in Manbhum, Purulia and the adjoining eastern districts.

In the Indian Museum there is a female from Travancore which, by its wing-length (156 mm.), should be assigned to *bicincta* and not to *leggei* which is said to occur in southern Travancore although satisfactory evidence for the latter view is wanting.

Recently, Eates (1938, p. 330) found a stray specimen of *D. b. bicincta* as far west as Kiamari (Karachi, Sind). This is considerably beyond the hitherto known western range of the subspecies. Eates opined that the bird might possibly have been driven so far south-westwards by the prevalent cold wave.

Whistler & Kinnear (1936, p. 673) have discussed its distribution in South India, and have shown that this bird is fairly common both in the eastern and western portions of the Madras Presidency. They further note that the status of Malabar birds is not yet clear.

***Dendrophassa bicincta leggei* (Hartert).**

(The Ceylon Orange-breasted Green Pigeon.)

1849. *Treron (Treron) bicincta* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 229, No. 1386.1910. *Treron bicincta leggei*, Hartert, *Novit. Zool.* XVII, p. 193. (Ceylon.)1928. *Dendrophassa bicincta leggei*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 192.1937. *Treron bicincta leggei*, Peters, *Check-list Birds World* III, p. 19.*Dendrophassa bicincta leggei* is represented in the collection of the Indian Museum by the following skin :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26566	♂	Vauvonia (North Prov., Ceylon).	Apr. 18, 1904	Colombo Mus., Ceylon.	151	106	23	16

Remarks.—Stuart Baker (1928, p. 192) gives the wing-length as 140-146 mm. In addition to No. 26566 listed here, I have examined a male from Ceylon (Coll.: Major E. W. Mayor, June, 1914) loaned by the Bombay Natural History Society. Both the males have the wing 151 mm. I am unable to separate these skins from the typical *bicincta*.

Distribution.—"Ceylon; birds from the south of Travancore may be referable here" (Peters).

***Dendrophassa bicincta praetermissa* (Robinson & Kloss).**

(The Siam Orange-breasted Green Pigeon.)

1849. *Treron (Treron) bicincta* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 229, No. 1386.1921. *Treron bisincta* (sic) *praetermissa*, Robinson & Kloss, *Journ. Fed. Malay States Mus.* X, p. 203. (Koh Lak, S. W. Siam.)1928. *Dendrophassa bicincta praetermissa*, Stuart Baker, *Faun. Brit. Ind. Birds* (2nd ed.) V, p. 193.1937. *Treron bicincta bicincta* (part), Peters, *Check-list Birds World* III, p. 19.*Dendrophassa bicincta praetermissa* is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.)			
					W.	Tl.	Tr.	C.
24562	(♂)	S. Sylhet (Assam). ..	(?)	C. B. Antram.	152	102	24	16
24563	(Juv. ♂)	S. Sylhet. ..	(?)	C. B. Antram.	[151	83	19	17]
24584	(Juv. ♂)	S. Sylhet. ..	(?)	C. B. Antram.	[146	85	22	15]
24506	(♀)	S. Sylhet. ..	(?)	C. B. Antram.	150	89	23	15
24561	(Juv.)	S. Sylhet. ..	(?)	C. B. Antram.	[139	(81)	23	15.5]
24566	(♂)	S. Sylhet. ..	(?)	C. B. Antram.	147	95	24	..
5895	(♀)	Arakan (W. Burma).	(?)	"Mus. Coll."	151	103	23	17
12949	♂	Pilai (Mergui, S. Burma).	Mar. 9, 1882	Dr. J. Anderson (Mergui Exped.).	152	(61)	23	18
12950	♂	Pilai (Mergui, S. Burma).	Mar. 13, 1882	Dr. J. Anderson (Mergui Exped.).	147	95	23	16

Remarks.—No. 24561 is a juvenile without any trace of the lilac band and orange patch on the breast; Nos. 24563 and 24584 are also juveniles, but the lilac band and orange patch on the breast, which are characteristic of the adult male, are faintly seen.

Robinson & Kloss (1921, p. 203) while creating *praetermissa* remarked: "Larger than *T. b. bisincta* (Jerdon) from Madras (wing 144): differs from *T. b. domvillii* (Swinh.) from Hainan in having the grey nuchal patch in the female clear and more extensive whereas, fide Hartert, it is indistinct and small in the island bird. Wing 157-163 mm."

Stuart Baker (1928, p. 190, key) stated that *praetermissa* is "lighter and more yellow" than *bisincta*; he further added (p. 193): "Only differs from *D. b. bisincta* in being somewhat more yellow and brightly coloured, hardly sufficiently so to enable one to differentiate it as a subspecies. The female, however, has usually more grey on the nape. ...Measurements as in the Indian bird."

So far as the skins in the Indian Museum are concerned, none of the above distinctions works. The females from Travancore to Burma all look exactly alike. It is, however, possible to distinguish between the two males from Bihar and western Bengal on the one hand, and the three males from southern Sylhet (Assam) and Mergui (southern Burma) on the other. In the former, the dorsal grey patch is larger (50-60 mm. long) and extends from the hind-crown to the foreback; in the latter, the grey patch is much smaller (35-38 mm. long). The grey patch is not sharply defined at either ends, so that the above measurements are approximate. The specimens available to me are too few for generalisation; nevertheless the distinction given here is noteworthy, and may prove to be subspecific.

The few Assamese and Burmese birds in the Indian Museum collection are not larger (wing 147-152 mm.) than those from the rest of India.

Distribution.—Stuart Baker (1930, p. 688) gave the range as: "Assam south of the Brahmapootra; Bengal East of Bay; all Burma" But this does not include the type-locality in S. W. Siam! The range also includes the northern portions of the Malaya Peninsula and western Siam (Robinson & Chasen, 1936, p. 47).

***Dendrophassa vernans* (Linnaeus).**

The species is distributed from southern Tenasserim *via* the Malay Peninsula, Java, Sumatra and Borneo to Celebes in the east, and *via* Siam to Indo-China and possibly a little further up in the north, and the Philippines in the north-east. Peters (1937, pp. 18, 19) recognises eight subspecies of which only *D. v. griseicapilla* occurs within the Indian limits.

***Dendrophassa vernans griseicapilla* (Schlegel).**

(The Malay Pink-necked Green Pigeon.)

1849. *Treron (Treron) viridis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 229, No. 1387.

1863. *Treron griseicapilla*. Schlegel, *Neder. Tijds. Dierk.* I, p. 70. (Sumatra and Banka.)

1928. *Dendrophassa vernans griseicapilla*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 194.

1937. *Treron vernans griseicapilla*, Peters, *Check-list Birds World* III, p. 18.

Dendrophassa vernans griseicapilla is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
12951	♂	Yumeekee (Mergui, S. Burma).	Feb. 24, 1882	Dr. J. Anderson.	144	101	24	..
12952	(♀)	Pilai (Mergui, S. Burma).	Mar. 9, 1882	Dr. J. Anderson.	137	88	22	
17907	♂	Perak (Malay Penin.).	(?)	(?)	141	94	22	17
17908	♂	Perak (Malay Penin.).	(?)	(?)	147	110	21	15
3919	(♂)	Malacca (Malay Penin.).	(?)	(?)	152	96	22	16
26559	♂	Pulau Bintang (Rhio Archipelago).	May 28, 1930	Raffles Mus., Singapore.	150	94	25	16
26560	♀	Pulau Bintang (Rhio Archipelago).	May 28, 1930	Raffles Mus., Singapore.	138	..	23	15
12044	♀	(?)	Mar. 11, 1875	W. Rutledge	138	87	24	16
22338	♀	(?)	Nov. 16, 1897	W. Rutledge	134	85	20	15
22339	♀	(?)	Nov. 25, 1897	W. Rutledge	132	(89)	22	15
22340	♀	(?)	Dec. 9, 1897	W. Rutledge	141	98	15	14
22341	♀	(?)	Nov. 26, 1897	W. Rutledge	121	79	21	14
3200	(♂)	Amoy (Fu-Kien, E. China).	(?)	R. Swinhoe	135	92	22	16

Distribution.—"Southern Tenasserim, Malay Peninsula, Cambodia, Cochinchina, Sumatra (except northeastern), Rhio Archipelago, Banka, Billiton, western Java and northern Borneo" (Peters).

Delacour & Jabouille (1940, p. 115) also include southern Annam in French Indo-China within its range.

In the Indian Museum there is a skin, No. 3200 (♂), from Amoy, E. China, which is indistinguishable from *griseicapilla*. This seems to be the sole record from E. China—La Touche (1932) does not list it from that area.

Genus **Treron** Vieillot.

Treron curvirostra (Gmelin).

The species extends from western Nepal to several islands of the East Indies. Peters (1937, pp. 14, 15), following Hartert, recognises ten subspecies of *T. curvirostra*. Of these only *T. c. nipalensis* occurs within the Indian limits.

As pointed out by Ticehurst (1930, p. 477), Stuart Baker's (1928, p. 195) statement that of *T. curvirostra*, "two races ... *T. c. curvirostra* and *T. c. nipalensis*, extend through the greater part of our area..."

is misleading because it suggests that both the subspecies occur within the Indian limits, though actually only *nipalensis* occurs.

***Treron curvirostra nipalensis* (Hodgson).**

(The Northern Lesser Thick-billed Green Pigeon.)

1836. *Toria Nipalensis*, Hodgson, *Asiat. Res.* XIX, p. 164. (Nepal.)

1928. *Treron curvirostra nipalensis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 196.

1937. *Treron curvirostra nipalensis*, Peters, *Check-list Birds World* III, p. 14.

Treron curvirostra nipalensis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26541	♂	"Chupramai" (Jalpai-guri Dist., N. Bengal).	Mar. 19, 1935	C. M. Inglis.	139	83	24	14
26542	♀	"Imenghat Forest" (The Duars, N. Bengal).	Mar. 24, 1928	C. M. Inglis.	139	77	23	15
24578	♂	S. Sylhet (Assam). . .	(?)	C. B. Antram.	139	92	22	14
24579	♂	S. Sylhet (Assam). . .	(?)	C. B. Antram.	142	(95)	24	15
24580	♀	S. Sylhet (Assam). . .	(?)	C. B. Antram.	133	80	23	14
12916	♂	Pilai (Mergui, S. Burma).	Mar. 5, 1882	Dr. J. Anderson (Mergui Exped.).	137	90	21	14
26562	♂	Chiengmai, N. Siam. (Purchased as skin.)	Apr. 6, 1937	Raffles Mus., Singapore.	143	92	24	14
26563	♀	Bandon (Peninsular Siam).	July 14, 1929	Raffles Mus., Singapore.	139	76	22	14

Distribution.—"Western Nepal east through Assam and the Shan States to French Indochina, south to Bengal, Tenasserim, Siam and Cambodia" (Peters).

Genus ***Butreron*** Jacquinot & Pucheran.

The genus contains a single species, *B. capellei*.

***Butreron capellei* (Temminck).**

(The Large Thick-billed Green Pigeon.)

1823. *Columba capellei*, Temminck, *Pl. Color d'Oiseaux* IV, livr. 24, p. 223, pl. 143. (Java.)

1849. *Treron capellei*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 228, No. 1382.

1928. *Butreron capellei*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 197.

1937. *Butreron capellei*, Peters, *Check-list Birds World* III, p. 13.

Butoreron capellei is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
12948	♀	Pilai (Mergui, S. Burma).	Mar. 13, 1882	Dr. J. Anderson (Mergui Exped.).	203	(109)	33	(22)
17095	♂	Perak (Malay Penin.).	(?)	" Mus. Coll."	193	140	27	21
17906	♀	Perak (Malay Penin.).	(?)	" Mus. Coll."	198	129	31	20
26458	♂	Malacca (Malay Penin.).	1844	Rev. F. W. Lindstedt (Asiat. Soc. Bengal).	196	126	32	22
26459	♂	Malacca (Malay Penin.).	1844	Rev. F. W. Lindstedt (Asiat. Soc. Bengal).	191	125	30	22
13454	(Juv.)	Malacca (Malay Penin.).	(?)	Bengal Economic Mus.	[186	..	30	20]

Remarks.—Nos. 26458 and 26459 were listed by Blyth (1849, p. 229, No. 1382, A, B). No. 13454 is unsexed ; it is smaller than the others and its breast is golden yellowish-green ; it appears to be a juvenile.

Distribution.—"Malay Peninsula, Sumatra, Java and Borneo" (Peters).

Stuart Baker (1928, p. 199) remarked that it was once obtained by Dr. Anderson in Elphinstone Is. off the Mergui coast. I presume that this bird is the Indian Museum skin (No. 12948, ♀) from Pilai, Mergui, and was possibly a straggler. It is not known to breed within the Indian limits.

Some authors recognise various subspecies of *B. capellei*, but Peters does not admit them.

Genus **Sphenurus** Swainson¹.

Sphenurus apicauda (Blyth).

The species extends from the Himalayan foot-hills of Kumaun (U. P., India) in the west, *via* Assam, Burma (including Tenasserim) and Siam(?) to Indo-China. It does not occur, except perhaps as a straggler, in the Malay Peninsula. Of the three subspecies recognised by Peters (1937, p. 11), only *S. a. apicauda*, occurs within the Indian limits.

Sphenurus apicauda apicauda (Blyth).

(The Pin-tailed Green Pigeon.)

1845 (after May 1846). *Treron apicauda* "Hodgson" Blyth, *Journ. Asiat. Soc. Bengal* XIV, p. 845. (Southeastern Himalayas and hill ranges of Assam ; common at Darjeeling.)

1849. *Treron (Sphenocercus) apicauda*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 230, No. 1392.

1928. *Sphenocercus apicaudus apicaudus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 199.

1937. *Sphenurus apicauda apicauda*, Peters, *Check-list Birds World* III, p. 11.

¹*Sphenurus* Swainson 1837 replaces *Sphenocercus* G. R. Gray 1840.

Sphenurus apicauda apicauda is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
3929	(♀?)	Kurseong, 2,000 ft. (Sikkim).	May 19, 1870	Capt. H. J. Elwes.	159	160	29	20
26457	(♀?)	Darjeeling (N. Bengal).	1845	Mr. Webb (Asiat. Soc. Bengal).	165	..	23	16.5
26539	♀	Hsimara Duars, 500 ft. (N. Bengal).	Mar. 7, 1927	Mr. C. M. Inglis.	164	171	26	19
26540	♂	Rahti Forest (Jalpaiguri Dist., N. Bengal).	Feb. 27, 1937	Mr. C. M. Inglis.	170	190	24	21
26343	♂	Chongliemseu (Naga Hills, Assam).	Mar. 3, 1935	Zool. Survey of India.	164	231	24	20
26455	(♂?)	(?)	(?)	Asiat. Soc. Bengal.	168	203	26	19
26456	(♂?)	(?)	(?)	Asiat. Soc. Bengal.	166	223	29	18

Remarks.—No. 26457 was listed by Blyth (1849, p. 230, No. 1392 B.)

Distribution.—"Himalayan foothills up to 6000 feet from Kumaun to eastern Assam and southward to Tenasserim" (Peters).

Stuart Baker (1928, p. 200; 1935, p. 135) gave the following additional range :—Goes up to at least 8,000 feet; found as a straggler in the plains of Bihar and Bengal; a solitary but rather doubtful instance from Perak in northern Malaya.

***Sphenurus sphenurus* (Gould).**

The species ranges along the Himalayan foothills from Kashmir in the west, *via* Assam to Yunnan and northern Tonkin, and Annam (Indo-China) to the Island of Hainan; also in the mountains in the main range of the Malay Peninsula. Peters (1937, p.12) admits five subspecies of which only *S. s. sphenurus* occurs within the Indian limits.

***Sphenurus sphenurus sphenurus* (Gould).**

(The Wedge-tailed Green Pigeon.)

- 1831. *Vinago sphenura*, Gould, *Century of Birds*, pl. 57. (Himalayas.)
- 1831. *Vinago sphenura*, Gould, *Birds hitherto unfigured from the Himalaya Mts.*, pl. 40. (Himalayas.)
- 1849. *Treron (Sphenocercus) cantillans*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 230, No. 1391.
- 1928. *Sphenocercus sphenurus sphenurus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 200.
- 1937. *Sphenurus sphenurus sphenurus*, Peters, *Check-list Bird World III*, p. 12.

Sphenurus sphenurus sphenurus is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26453	(♂)	"Murri" (= ? Murree, Rawalpindi Dist., N. Punjab).	June 30, 1873	Dr. F. Stoliczka (Yarkand Exped.).	178	139	23	18
26454	(Juv.)	"Murri" (= ? Murree, Rawalpindi Dist., N. Punjab).	July 2, 1873	Dr. F. Stoliczka (Yarkand Exped.).	[168	106	25	..]
4334	♂	Katmandu (Nepal).	(?)	"Mus. Coll."	175	135	24	19
3926	♂	Darjeeling (N. Bengal).	(?)	Dr. J. Anderson.	180	142	26	20
3927	(Juv.)	Darjeeling (N. Bengal).	(?)	Dr. J. Anderson.	[180	133	23	..]
3928	♀	Darjeeling (N. Bengal).	Nov. 1871	(Mr. Donett ?)	171	122	27	17
23222	♀	"Loisampa" = Loi-San-Pa, 600 ft. (S. Shan States).	Jan. 1, 1900	Col. C. T. Bingham.	166	98	25	12

Remarks.—In the Indian Museum there is a poorly preserved skin labelled : "Type No. 1391, *Sphenocercus cantillans* Blyth. Upper Provinces ? Purchased. A. S. B." This appears to be the bird described by Blyth (1843, p. 166) as *Vinago cantillans* (Cape variety), and subsequently by the same author (1849, p. 230, No. 1391 D) as *Sphenocercus cantillans*. The Indian Museum specimen resembles *Sphenurus sphenurus sphenurus* in structural characters but is very different in coloration. The green, orange and yellow of the normal bird is here completely replaced by dark grey; the fore-head is pink-rufous and the fore-breast pinkish grey; the upper back, scapulars and lesser wing-coverts are maroon as in the male of *S. s. sphenurus*. Salvadori (1893, p. 10) regarded it as a separate variety, *cantillans*, and recorded two specimens in the British Museum—one adult ♂ collected by A. Grote (no locality) in the Gould Coll., and another adult ♀ collected by B. M. Hodgson from Nepal. Jerdon (1864, p. 453) had stated that "after moulting in confinement, the green colour, in some specimens, becomes pale maronne" This statement was repeated by Blanford (1898, p. 17), but lacks further confirmation.

Distribution.—"Mountains between 2000 and 8000 feet from Kashmir to Assam and the Shan States, south to Tenasserim" (Peters).

Subfamily *DUCULINAE*.

Genus *Ducula* Hodgson¹.

Ducula badia (Raffles).

The species ranges from India and Burma to Yunnan, Siam and Indo-China, and *via* the Malay Peninsula to Sumatra, Java and Borneo.

¹ I have used the name *Ducula* in the restricted sense of Hodgson (*Asiat. Res.* XIX, p. 160, 1836) as accepted by Stuart Baker (1928, p. 202). It is partly equivalent to *Carpophaga* Selby. Peters (1937, pp. 42-54) uses *Ducula* Hodg. in the extended sense so as to include in it nine genera including *Carpophaga* Selby and *Myristicivora* Reichenbach,

Peters (1937, p. 51) specifically separates *D. lacernulata* (Temminck) (Java, Lombok and Flores) from *D. badia*, but Chasen (1935, p. 19) regards the two groups as conspecific under *badia*.

***Ducula badia badia* (Raffles).**

(The Malay Imperial Pigeon or Mountain Imperial Pigeon.)

1822. *Columba badia*, Raffles, *Trans. Linn. Soc. Lond.* XIII, p. 317. (Sumatra = Benkulen, W. Sumatra.)

1928. *Ducula badia badia*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 202.

1937. *Ducula badia badia*, Peters, *Check-list Birds World* III, p. 51.

Ducula badia badia is represented in the collection of the Indian Museum by the following skin :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26554	♂	Bought alive in Bagan Datok Market, Perak (Malay Penin.).	Jan. 18, 1915	Raffles Mus., Singapore.	239	100	32	22

Distribution.—"Southern Tenasserim southward over the Malay Peninsula ; islands off the Mergui coast ; Sumatra ; Borneo " (Peters). Certain records from Yunnan proved later to be erroneous.

***Ducula badia insignis* Hodgson.**

(Hodgson's Imperial Pigeon.)

1836. *Ducula insignis*, Hodgson, *Asiat. Res.* XIX, p. 162, pl. 9 (head and foot). (Nepal.)

1849. *Carpophaga insignis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 232, No. 1404.

1913. *Ducula insignis insignis*, Stuart Baker, *Rec. Ind. Mus.* VIII, pp. 286, 287. (*a* only ; *b* from Kobo is wrongly identified as *Ducula* ; it is really *Alsocomus puniceus* Blyth.)

1928. *Ducula badia insignis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 203.

1937. *Ducula badia insignis*, Peters, *Check-list Birds World* III, p. 51.

Ducula badia insignis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26467	♀	Darjeeling (N. Bengal).	1849	Asiat. Soc. Bengal.	233	185	31	20
3970	♀	Darjeeling (N. Bengal).	1870	Capt. H. J. Elwes.	240	197	28	23
26543	♂	Jalpaiguri Dist. (N. Bengal).	Jan. 26, 1940	Mr. C. M. Inglis.	241	196	32	22.5
26544	♀	Hasimari (Jalpaiguri Dist., N. Bengal).	Jan. 25, 1940	Mr. C. M. Inglis.	240	187	31	23
25372	(?)	Pasighat, 600 ft. (N. E. Assam).	1912	Dr. S. W. Kemp (Abor Exped.).	252	197	29	25

Remarks.—No. 26467 was recorded by Blyth (1849, p. 232, No. 1404 B).

Distribution.—"Western Nepal, Sikkim and Bhutan, east to Khasia Hills and the Brahmapootra River" (Peters).

***Ducula badia griseicapilla* Walden.**

(The Grey-headed Imperial Pigeon.)

1849. *Carpophaga insignis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 232, No. 1404.

1875. *Ducula griseicapilla*, Walden, *Ann. Mag. Nat. Hist.* (4) XVI, p. 228. (Karen Hills between 4,000 and 4,200 feet, Burma).

1928. *Ducula badia griseicapilla*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 204.

1937. *Ducula badia griseicapilla*, Peters, *Check-list Birds World* III, p. 51.

Ducula badia griseicapilla is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26466	♂	63 miles west of Imphal (Manipur State, Assam).	Feb. 13, 1936	Zool. Survey of India.	244	207	31	25
23220	♂	"Loisampa" = Loi-San-Pa (Shan States).	Dec. 30, 1899	Col. C. T. Bingham.	247	206	35	25

Distribution.—"Burma and southwestern Yunnan to northern Tenasserim, Siam and all Indochina" (Peters).

Stuart Baker (1928, pp. 204, 205) also includes within its range the whole of Assam (except the hill ranges of Brahmaputra River and the Khasia Hills where *insignis* occurs). He says that the birds from Cachar, Sylhet, Manipur and the Bengal districts east of the Bay, though somewhat intermediate between *insignis* and *griseicapilla*, are nearest to the latter.

***Ducula badia cuprea* (Jerdon).**

(Jerdon's Imperial Pigeon.)

1840. *Carpophaga cuprea*¹, Jerdon, *Madras Journ. Lit. & Sci.* XII, p. 12. (Wynaad, Malabar, S. India.)

1928. *Ducula badia cuprea*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 205.

1937. *Ducula badia cuprea*, Peters, *Check-list Birds World* III, p. 51.

Ducula badia cuprea is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
18456	♂	Madathuray (Travancore).	(?)	"Mus. Coll. Jaffa."	223	173	29	23
18457	♀	Madathuray (Travancore).	(?)	"Mus. Coll. Jaffa."	223	174	31	24
23962	(?)	Palode (N. or S. Travancore).	1870	Trivandrum Mus.	235	(171)	31	24
18696	♀	N. Bangalore (Mysore State).	(?)	"Mus. Coll. Jaffa."	225	175	31	(21)

¹ Not *Columba cuprea* as wrongly given by some authors including Stuart Baker (1928, p. 205).

Distribution.—"Southwestern India from Kanara, southward" (Peters). Once (?) recorded from Ceylon¹.

Genus **Muscadivora** Schlegel².

Muscadivora aenea (Linnaeus).

The species ranges from India, Ceylon, the Andaman and Nicobar Islands and the Indo-Burmese countries (including Burma, Siam, French Indo-China, the Malay Peninsula) to the Malayasian Islands (Java, Sumatra, Borneo and Celebes), and thence east to the Philippines and the Flores, and Lombok and Sulu Islands. Peters (1937, pp. 46, 47) admits thirteen subspecies of which four occur within the Indian limits.

Muscadivora aenea aenea (Linnaeus).

(The Malay Green Imperial Pigeon.)

1766. *Columba aenea*, Linnaeus, *Syst. Nat.* (12th ed.) I, p. 283. ("In Moluccas", *errore*=Flores Is., Dutch East Indies, *vide* Hartert & Goodson, *Novit. Zool.* XXV, p. 346, 1918.)

1849. *Carpophaga sylvatica* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 231, No. 1401.

1928. *Muscadivora aenea aenea*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 207.

1937. *Ducula aenea aenea*, Peters, *Check-list Birds World* III, p. 46.

Muscadivora aenea aenea is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	TL.	Tr.	C.
26555	♀	Juara Bay, Pulau Tioman, S. China Sea.	June 9, 1906	Raffles Mus., Singapore.	226	157	34	21
26337 (Mounted in gallery.)	♀	(?)	May 11, 1935	Zool. Gardens, Calcutta.	(229)	147	..	25

Distribution.—"Southern Tenasserim and southern Siam, southward over the Malay Peninsula; Rhio Archipelago, Sumatra, Java, Banka, Borneo; Anamba, Natuna and Tambelan Islands; Lombok, Sumbawa, Sumba, Flores, Panter and Alor; Sulu Archipelago" (Peters).

Its Indian distribution "Southern Tenasserim" needs some comments. Stuart Baker (1928, p. 208) remarked that "Tenasserim specimens, as in so many species of birds, are somewhat intermediate but the southernmost seem distinctly referable to this race" In the Indian Museum there are a few skins (p. 313) from Taing and Pilai in the Mergui area which are referable to race *sylvatica* (not *aenea*), so that *aenea* probably occurs only farther south than Taing and Pilai.

¹ The only record is that given by Stuart Baker (1913, p. 107) who says that J. Stewart obtained this bird, together with an egg (taken in October) at Ratnapura in Ceylon. Later (1935, p. 139) he refers evidently this same specimen to Inglis, and in this he appears to be wrong. Phillips (1941, p. 205) says that it was "recorded only once, from the Sabaragamuwa jungles"—this is probably the same record as that given by Stuart Baker.

² Stuart Baker (1928, p. 206) wrongly assigns this genus to Selby (*Nat. Libr., Pigeons*, p. 112, 1835) who is the author of *Carpophaga*. *Carpophaga* Selby = *Muscadivora* Schlegel (see Salvadori, 1893, p. 181).

***Muscadivora aenea sylvatica* (Tickell).**

(The Indian Green Imperial Pigeon.)

1833. *Columba Sylvatica*, Tickell, *Journ. Asiat. Soc. Bengal* II, p. 581. (Jungles of Borobhum and Dholbhum, Bihar.)1849. *Carpophaga sylvatica* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 231, No. 1401.1928. *Muscadivora aenea sylvatica*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 208.1937. *Ducula aenea sylvatica*, Peters, *Check-list Birds World* III, p. 46.

Muscadivora aenea sylvatica is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
3963	♀	Daminiok (Bihar ?).	(?)	Mr. V. Ball.	235	162	27	23
3965	♂	Rajmahl Hills (E. Bihar).	(?)	Mr. V. Ball.	240	160	31	20
5730	(?)	Lamagooting (Assam).	(?)	Capt. Butler.	230	153	34	20
5731	(?)	Lamagooting (Assam).	(?)	Capt. Butler.	240	156	40	22
5732	(?)	Lamagooting (Assam)	(?)	" Mus. Coll."	239	160	29	23
3964	(?)	Cachar (Assam). ..	(?)	" Mus. Coll."	234	155	35	23
3966	(?)	Cachar (Assam). ..	(?)	" Mus. Coll."	245	163	30	21
6951	(?)	Naga Hills (Assam). ..	(?)	Capt. Butler.	240	169	34	(22)
6952	(?)	Naga Hills (Assam). ..	(?)	Capt. Butler.	245	166	42	26
13325	♀	Jergo Is. (off Arakan Coast, W. Burma).	Mar. 1884	Marine Survey of India.	232	155	41	25
9046	♂	Poodeepgoo (Upper Burma).	1875	Dr. J. Anderson.	245	160	29	25.5
5732	(?)	Burma.	(?)	" Mus. Coll."	234	153	31	23
5733	♀	Burma.	(?)	Capt. Butler.	232	153	28	23.5
12913	(?)	Taing (Mergui, S. Burma).	Jan. 31, 1882	Dr. J. Anderson (Mergui Exped.).	245	(170)	31	(22)
12912	(?)	Taing (Mergui, S. Burma).	Jan. 31, 1882	Dr. J. Anderson (Mergui Exped.).	232	154	31	24
12909	♂	Pilai (Mergui, S. Burma).	Mar. 9, 1882	Dr. J. Anderson (Mergui Exped.).	231	160	33	22
12910	♀	Pilai (Mergui, S. Burma).	Mar. 9, 1882	Dr. J. Anderson (Mergui Exped.).	233	166	28	24
12911	♂	Pilai (Mergui, S. Burma).	Mar. 13, 1882	Dr. J. Anderson (Mergui Exped.).	239	156	33	23
3967	(?)	Andamans. ..	(?)	Dr. G. E. Dobson.	232	(153)	30	22
3968	(?)	Andamans. ..	(?)	Dr. G. E. Dobson.	241	165	31	24
3969	(?)	Andamans. ..	(?)	Dr. G. E. Dobson.	232	(162)	32	22
26468	♀	Anikhet (Port Blair, S. Andamans).	Feb. 28, 1890	Dr. G. H. Bailey.	232	148	30	24

Remarks.—Stuart Baker (1928, p. 208) states that the “Andaman birds are very green and average more white on the forehead and face but seem hardly separable from *sylvatica*” The few skins from the Andamans in the Indian Museum support these remarks.

In the Indian Museum specimens no difference in measurement is discernible between birds from Eastern India, Burma and the Andamans.

Distribution.—“Nepal, Sikkim Terai and Assam, south to about lat. 20° N. in the Indian Peninsula, central Tenasserim, northern Siam and all of Indochina; Andaman Islands¹; Pulo Condor, Hainan (?)” (Peters).

***Muscadivora aenea pusilla* (Blyth).**

(The South Indian Green Imperial Pigeon.)

1849. *Carpophaga pusilla*, Blyth, *Journ. Asiat. Soc. Bengal* XVIII, Pt. 2, p. 816. (Nilgiris, *errore*=South India, *vide infra*.)

1849. *Carpophaga pusilla*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 232, No. 1402.

1928. *Muscadivora aenea pusilla*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 209.

1937. *Ducula aenea pusilla*, Peters, *Check-list Birds World* III, p. 46.

Muscadivora aenea pusilla is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
18455	♂	“Mudthary” (Travancore).	(?)	“Mus. Coll.”	217	150	30	24
26469 (Holo-type).	(?)	“Nilgiris” (<i>errore</i>) (=S. India).	1845	Dr. T. C. Jerdon.	210	(138)	28	20
26470 (Syn-type).	(?)	“Nilgiris” (<i>errore</i>) (=S. India).	1845	Dr. J. C. Jerdon.	202	142	30	(22)
26548	♂	Katupathawwa (North Central Prov., Ceylon). [<i>Dry Zone</i> .]	Sept. 11, 1919.	Colombo Mus., Ceylon.	215	160	30	19
26547	♀	Higara or Hujara (South Prov., Ceylon). [<i>Wet Zone</i> .]	May 18, 1932.	Colombo Mus., Ceylon.	213	151	(32)	24

Remarks.—Blyth (1849a, p. 816) wrote about the bird as follows:—“No. 1402 *C. pusilla*, nobis. Like *C. sylvatica* (vel *aenea* of India), but much smaller, and nape very rufescent. Length of wing 8½ in.; of tail 5½ in. Nilgiris.” No other particulars were given. In his *Catalogue* (1849, p. 232) he wrote: “1402 *C. pusilla*, Blyth, J. A. S. XVIII, HAB. Nilgiris. A. Specimen presented by T. C. Jerdon, Esqr. (1845).”

In the Indian Museum, however, there are two skins, Nos. 26469 and 26470, which bear identical labels as follows:—“Type No. 1402, *Carpophaga pusilla* Blyth. Nilgiris. T. C. Jerdon, Esqr., 1845, A. S. B.” No doubt, one of these two skins is the specimen listed in Blyth’s

¹ “The Andaman birds possibly represent a distinct race” (Peters).

Catalogue. Of the two, No. 26469 agrees with Blyth's *Journ. Asiat. Soc. Bengal* specimen in measurements (wing $8\frac{1}{4}$ "=about 210 mm.; tail $5\frac{1}{2}$ "=about 138 mm.) and also in having the nape rupestrous. It must therefore be regarded as the Holotype. No. 26470 then becomes a Syntype.

Type-locality.—Referring to this bird as *Carpophaga sylvatica*, Jerdon (1864, p. 456) showed that Blyth was wrong in accepting Nilgiris as the type-locality. Jerdon wrote: " I do not consider Blyth's small race *C. pusilla*, from the South of India, distinct from the bird of Central India ; the supposed new species was founded on a peculiarly small specimen." And further: " .Mr. Blyth was mistaken when he stated that the specimen sent him by myself, from which he made his *pusilla*, was from the Neilgherries [old spelling of Nilgiris] ; indeed I have not even seen this pigeon in the Wynad."

Blyth's type, therefore, did not come from the Nilgiris, but from some other place in " South of India " The type-locality should, therefore, be South India. (Stuart Baker, 1928, p. 209, gives the type-locality as Ceylon, but without authority.)

Distribution.—" Indian Peninsula from about lat. 20°N., southward ; Ceylon " (Peters).

Genus **Myristicivora** Reichenbach.

Myristicivora bicolor (Scopoli).

(The Pied Imperial Pigeon.)

1786. *Columba bicolor*, Scopoli, *Delic. Flora et Faunae Insubr.*, fasc. 2, p. 94. (New Guinea.)

1849. *Carpophaga bicolor*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 232, No. 1406.

1928. *Myristicivora bicolor bicolor*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 211.

1937. *Ducula bicolor*, Peters, *Check-list Birds World* III, p. 50.

Some authors have recognised several races of this species, but they are not admitted by Peters (1937, p. 50).

Myristicivora bicolor is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
18347	♀	Andamans. . . .	(?)	G. H. Booley	(220)	..	33	25
3972	(?)	Nicobars. . . .	(?)	(?)	224	137	32	24
3973	(?)	Nicobars. . . .	(?)	(?)	207	119	31	22
26556	♂	Pulau Jarak, Straits of Malacca (Malaya).	April 8, 1915.	Raffles Mus., Singapore.	225	123	31	23
10806	♀	New Guinea. . . .	June 1877	Jardin des Plantes (Paris ?).	224	112	32	23
26822	♀	(?)	1901	Zool. Gardens, Calcutta.	247	143	35	23

Remarks.—No. 18347 is a poorly preserved specimen with the plumage soiled with fat; the tail and wings are damaged; the under tail-covert have a few irregular black spots at the base. In Nos. 3972 and 3973 the under tail-coverts are pure white with no black spots.

Distribution.—"Recorded from many localities between the Bay of Bengal and the Philippines, eastward to the Aru Islands and islands west of New Guinea. Occurs chiefly on smaller islands and islets, wandering in large flocks from island to island in search of food" (Peters).

There is a skin, No. 10806, in the Indian Museum merely labelled "New Guinea"

Family COLUMBIDAE.

Subfamily COLUMBINAE.

Genus *Columba* Linnaeus¹.

Columba livia Gmelin.

The species ranges from the British Isles and W. Europe, *via* N. Africa and W. Asia to India, and N. China (?). Peters (1937, pp. 58-60) admits fourteen subspecies of which two, *neglecta* and *intermedia*, occur with certainty within the Indian limits, while about the occurrence of a third, *livia*, opinion is divided—most probably it does not occur within the Indian limits.

Columba livia neglecta Hume.

(Hume's Blue Rock Pigeon.)

1873. *Columba neglecta*, Hume, *Lahore to Yarkand* (by Henderson & Hume), p. 272. (Ladak, Kashmir.)

1928. *Columba livia neglecta*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 220.

1937. *Columba livia neglecta*, Peters, *Check-list Birds World III*, p. 59.

Columba livia neglecta is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
9931	♀	West of Bām (E. Iran).	April 26, 1872	Mr. W. T. Blanford.	219	130	29	19
24850	♀	Kuhak (Seistan, E. Iran).	April 22, 1905	J. W. N. Cumming.	218	121	30	19
25463	(?)	Lab-i-Baring, 1,600 ft. (Seistan, E. Iran).	March 11, 1919	Drs. N. Annandale & S. W. Kemp.	230	136	31	19

¹ *Columba*, Linnaeus, *Syst. Nat.* (10th ed.) I, p. 162, 1758. Type (by subsequent designation of Vigors, 1825) is *Columba oeneas*, Linnaeus (*loc. cit.*). Stuart Baker (1928, pp. 218, 219), following Mathews (1927, p. 55), regards as the type *Columba palumbus* Selby (*Ill. Brit. Orn.* I, p. xxx, 1825). He gives Selby's date first (p. 218) as 1852 and then (p. 219) as 1925, both wrong, as Ticehurst pointed out in 1930. Both Hartert (1920) and Peters (1937) give priority to Vigors 1825 over Selby 1825, and I follow them,

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
21879	♂	Shorawak (S. Afghanistan).	(?)	Dr. F. R. Maynard.	231	126	(32)	19
22838	(?)	(Kashmir or Yarkand region ?).	Aug. 11, 1873	Capt. Trotter (Forsyth's Yarkand Exped., 1873-74).	216	127	30	19
22836	♀	(Kashmir or Yarkand region ?).	Aug. 20, 1873	Dr. F. Stoliczka (Forsyth's Yarkand Exped., 1873-74).	222	129	31	21
6059	♂	Kharbu (=Kurbu or Karbu) (Ladak, Kashmir).	June 26, 1870	Dr. G. Henderson.	227	135	32	20
22835	(?)	Kharbu (=Kurbu or Karbu) (Ladak, Kashmir).	Aug. 21, 1873	Dr. F. Stoliczka.	222	135	32	21
17268	♂	Shergul (Kashmir).	Sept. 25, 1875	Dr. J. Scully.	235	120	(30)	18
17269	♀	Shergul (Kashmir).	Sept. 25, 1875	Dr. J. Scully.	231	..	31	21
22837	(?)	Nurla (Kashmir).	Aug. 28, 1873	Dr. F. Stoliczka.	225	125	31	21
7963	♀	Gilgit, 5,000 ft. (Kashmir).	July 1876	J. Biddulph.	212	116	29	19
17276	♂	Gilgit (Kashmir).	Nov. 19, 1878	Dr. J. Scully.	227	125	30	21
17279	♀	Gilgit (Kashmir).	Jan. 12, 1879	Dr. J. Scully.	215	120	29	18
17277	♂	Gilgit (Kashmir).	March 9, 1879	Dr. J. Scully.	222	128	31	21
17278	♂	Gilgit (Kashmir).	May 24, 1879	Dr. J. Scully.	230	128	33	20
22839	♂	Gilgit (Kashmir).	Jan. 16, 1880	Dr. J. Scully.	..	123	30	20
6097	(?)	Dras (Kashmir).	June 23, 1870	Dr. G. Henderson.	214	112	27	19

Remarks.—The specimens of *neglecta* in the Indian Museum are in some respects, especially the colour of the rump, intermediate between *livia* and *intermedia*. As pointed out by Ticehurst (1923, p. 463), in *neglecta* the rump is in most cases either very pale grey or white. But the lighter patch is considerably narrower than in *livia*. In a few cases, as in Nos. 7963 (Gilgit), 17269 (Shergul), 22835 (Kharbu), 22838 (Kashmir or Yarkand ?) and 21879 (Shorawak, S. Afghanistan), the rump is grey almost as in *intermedia* from which it is difficult to distinguish these individuals. However, other specimens from the same regions correspond to true *neglecta*.

Distribution.—"Transcaspia and Turkestan south to southern Persia, Baluchistan, Sind and northwestern Punjab" (Peters).

There is a specimen, No. 21879, in the Indian Museum from Shorawak in S. Afghanistan which is *neglecta*. (From N. E. Afghanistan, Meinertzhagen, 1938, p. 707, has recently recorded *C. l. gaddi*.)

Columba livia intermedia Strickland.

(The Indian Blue Rock Pigeon.)

1844. *Columba intermedia*, Strickland, *Ann. Mag. Nat. Hist.* XIII, p. 39 (India = Calcutta.)1849. *Columba* (*Columba*) *livia* (part, variety in S. Asia), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, pp. 233, 234, No. 1417, C to H.1928. *Columba livia intermedia*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 221.1937. *Columba livia intermedia*, Peters, *Check-list Birds World* III, p. 59.

Columba livia intermedia is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26515	(?)	" Upper Burma ". ..	1863	Col. Phayre.	215	122	30	18
26516	(?)	" Upper Burma ". ..	1863	Col. Phayre.	216	120	30	18
26517	(?)	Burma.	(?)	Dr. C. Williams.	219	117	33	..
26518	(?)	India.	(?)	Asiat. Soc. Bengal.	220	(135)	29	19
26519	(?)	Lower Bengal. ..	1843	Asiat. Soc. Bengal.	228	129	31	19
4000	(♀ ?)	Barrackpore (24-Paraganas, Bengal).	Feb. 1870	Asiat. Soc. Bengal (Purchased).	218	(132)	32	20
4001	(♀ ?)	Barrackpore (24-Paraganas, Bengal).	Feb. 1870	Asiat. Soc. Bengal. (Purchased).	226	..	29	20
17270	(?)	Katmandu (Nepal).	April 10, 1877	Dr. J. Scully.	204	116	29	..
17271	(?)	Katmandu (Nepal).	April 10, 1877	Dr. J. Scully.	218	138	30	18.5
17272	(?)	Katmandu (Nepal).	April 29, 1877	Dr. J. Scully.	213	121	27	20
17273	(?)	Balaji (Nepal). ..	May 15, 1877	Dr. J. Scully.	207	117	31	18
17275	(?)	Near Balaji (Nepal).	Nov. 25, 1877	Dr. J. Scully.	223	136	31	..
17274	♂	Harigaon (Nepal). ..	Sept. 17, 1877	Dr. J. Scully.	215	136	36	..
3999	(?)	Simla (Punjab). ..	(?)	Dr. F. Stoliczka.	231	124	30	20
3997	♂	Agra (U. P.). ..	Nov. 1867	" Riddell Mus."	213	125	31	21
3994	♀	Agra (U. P.). ..	Nov. 1869	" Riddell Mus."	212	130	31	22
26568	(?)	" Masuri " = ? Mussooree (U. P.).	1849	Capt. Hutton.	(231)	133	..	21
3995	♂	Chota Nagpur. ..	Dec. 1868	Mr. V. Ball.	226	(125)	31	20
3996	(?)	Daminfok (Bihar ?).	May 31, 1870	Mr. V. Ball.	210	118	28	18
3998	♂	Singhbhum (Bihar).	April 16, 1869	Mr. V. Ball.	220	123	33	19
10761	♂	Palamau (Bihar).	April 6, 1878	Mr. V. Ball.	212	118	30	19
11456	♂	" Bhoura " (= Bavda), 2,500 ft. (Kolhapur State, Bombay Pres.).	April 19, 1878	Surg. J. Armstrong.	217	120	31	20
23950	♂	Trivandrum (Travancore).	Nov. 1891	Trivandrum Mus.	206	..	30	20

Remarks.—Nos. 22351, ♀, 21950, ♂, and 23712 are ornamental breeds mounted in the gallery ; they are not listed in the above table.

No. 26517 ("Burma") and No. 26518 ("India") have a dark, almost black, upper plumage ; and No. 3996 (Daminiok, ?Bihar) is speckled with black on the back and wings. These three specimens are evidently domesticated varieties.

With the exception of some of the skins discussed above, all the other skins in the Indian Museum, including the two skins from "Upper Burma", Nos. 26515 and 26516, have the plumage typical of wild birds.

Hartert (1920, p. 1470) was of the opinion that the darkest and the most typical forms are found in S. India. The two S. Indian specimens, Nos. 11456 and 23950, in the Indian Museum are not appreciably darker than the N. Indian birds.

Distribution.—"All of India (except the part occupied by *neglecta*) east to western Assam and south to the dry parts of Burma ; Ceylon ; occurrence in Siam may be due to introduction" (Peters).

***Columba rupestris* Pallas.**

1827. *Columba Oenas* ♂ *rupestris*, Pallas, *Zoogr. Russo-Asiat.* I, p. 560. (Dauria, Transbaikalia.)

The species ranges from practically the whole of Asiatic Russia below the Arctic Circle down to Kashmir, Tibet and S. China in the south, and Manchukuo and Korea in the north-east. Peters (1937, p. 57) admits two subspecies of which one occurs within the Indian limits.

***Columba rupestris turkestanica* Buturlin.**

(The Turkestan Hill Pigeon.)

1893. *Columba rupestris pallida* (not *Columba pallida* Latham), Rothschild & Hartert, *Orn. Monatsb.* I, p. 41. (Altai Mts., Mongolia ; type from Katon Karagai.) Name preoccupied.

1908. *Columba rupestris turkestanica*, Buturlin, *Orn. Monatsb.* XVI, p. 45. (New name for *Columba rupestris pallida* Roth. & Hart.)

1928. *Columba rupestris turkestanica*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 222.

1937. *Columba rupestris turkestanica*, Peters, *Check-list Birds World* III, p. 57.

Columba rupestris turkestanica is represented in the collection of the Indian Museum by the following skins :—

(a) *Juveniles.*

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
21501	♂ (Juv.)	Little Pamir (E. Turkestan).	(?)	Dr. Alcock.	[205	124	27	19]
21502	♂ (Juv.)	Little Pamir (E. Turkestan).	(?)	Dr. Alcock.	[199	116	28	21]
21503	♀ (Juv.)	Little Pamir (E. Turkestan).	(?)	Dr. Alcock.	[200	118	27	20]
13289	♂ (Juv.)	Kilian Valley (E. Turkestan).	July 11, 1883	C. Ellis.	[223	115	26	18]

(b) Adults.

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
17282	♂	Gilgit (Kashmir).	Dec. 7, 1879	Dr. J. Scully.	228	123	29	17
17283	♂	Gilgit (Kashmir).	Dec. 7, 1879	Dr. J. Scully.	240	140	33	17
17284	♀	Gilgit (Kashmir).	Nov. 8, 1879	Dr. J. Scully.	230	122	28	17
17286	♀	Gilgit (Kashmir)	Dec. 8, 1879	Dr. J. Scully.	228	144	29	16
13288	(?)	Tutigalak, 14,000 ft. (Ladak, Kashmir).	May 25, 1883	C. Ellis.	225	116	28	..
13268	(?)	Tutigalak, 14,000 ft. (Ladak, Kashmir).	May 25, 1883	C. Ellis.	235	135	29	16
22843	(?)	Leh (Ladak, Kashmir).	Sept. 4, 1873	Dr. F. Stoliczka.	240	136	30	16
22847	(?)	Tank(t)se (Ladak, Kashmir).	Sept. 16, 1873	Dr. F. Stoliczka.	229	143	29	15
22848	(?)	Lu(c)kung or Lughung, (Ladak, Kashmir).	Sept. 19, 1873	Dr. F. Stoliczka.	222	135	31	16
22842	(?)	Lu(c)kung or Lughung (Ladak, Kashmir).	Sept. 19, 1873	Dr. F. Stoliczka.	219	131	30	17
22846	(?)	Above Sakti (Ladak, Kashmir).	Sept. 14, 1873	Dr. F. Stoliczka.	220	127	28	14
22849	(?)	Above Sakti, 14,000 ft. (Ladak, Kashmir).	Sept. 14, 1873	Dr. F. Stoliczka.	227	138	28	14
22845	(?)	Above Sakti, 14,000 ft. ((Ladak, Kashmir).	Sept. 14, 1873	Dr. F. Stoliczka.	234	129	30	17
22844	(?)	Above Sakti, 15,000 ft. (Ladak, Kashmir).	Sept. 14, 1873	Dr. F. Stoliczka.	215	128	28	17
17280	♂	Karakoram Pass (Kashmir).	Aug. 28, 1875	Dr. J. Scully	217	138	29	16
22853	(?)	Tangitar (E. Turkestan).	Feb. 18, 1874	Dr. F. Stoliczka.	220	129	27	16
22850	(?)	Tangitar (E. Turkestan).	Feb. 18, 1874	Dr. F. Stoliczka.	228	141	29	15.5
22852	(?)	Tangitar (E. Turkestan).	Feb. 18, 1874	Dr. F. Stoliczka.	234	144	30	14.5
22840	(?)	Tangitar (E. Turkestan).	Feb. 18, 1874	Dr. F. Stoliczka.	227	134	28	16
22841	(?)	Pasrabat (E. Turkestan).	March 26, 1874	Dr. F. Stoliczka.	235	139	30	17
22851	(?)	Pasrabat (E. Turkestan).	March 26, 1874	Dr. F. Stoliczka.	224	129	30	16.5
24946	♀	Khambajong (Tibet).	Oct. 7, 1910	Capt. H. J. Walton.	232	130	28	15
17281	♀	Ku(e)nlun Mts. (W. Tibet).	Aug. 16, 1875	Dr. J. Scully	220	141	28	(19)

Remarks.—The skins in Table (b) are clearly identifiable as *C. r. turkestanica* adults. The four skins in Table (a) differ from those in Table (b) in the following points:—(i) smaller size; (ii) absence of metallic sheen on the nape and foreback, these areas being dark slaty; (iii) absence of metallic gloss and of purple colour on the hind neck and the forebreast, these areas being dark grey-brown with narrow rufous-brown edgings to the feathers. The birds would thus appear to be the juveniles of *turkestanica*. They further differ from the adults in the particular noted below. Whereas in all the adult skins in Table (b), the first primary is subequal to the second and longer than the third, in the four skins in Table (a) it is not so. Three of them (Nos. 21501, 21502 and 21503) have the first primary considerably shorter than the second and third, the latter two being subequal. In the fourth,

No. 13289, the second primary is the longest, and the first and the third are subequal.

Distribution.—"Semiretchensk, Zaissan and the Russian Altai, south through Turkestan and western Tibet to Gilgit and the northern slopes of the Himalayas¹ (Peters).

***Columba leuconota* Vigors.**

The species ranges from W Afghanistan and S.W Turkestan (the Pamirs, etc.), north to Kansu in W. China, east to N. E. Burma and Yunnan, and south to the northern slopes of the Himalayas, including Nepal, Sikkim and Bhutan. Peters (1937, p. 57) admits two subspecies both of which occur within the Indian limits.

***Columba leuconota leuconota* Vigors.**

(The White-bellied or Snow Pigeon.)

1831. *Columba leuconota*, Vigors, *Proc. Comm. Zool. Soc. Lond.* Pt. 1, p. 23. (Himalayas. According to Peters, *infra*, the type was probably from Nepal. According to Hartert, 1920, p. 1473, the type probably lost, but certainly from west of Sikkim.)

1928. *Columba leuconota leuconota*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 224.

1937. *Columba leuconota leuconota*, Peters, *Check-list Birds World* III, p. 57.

Columba leuconota leuconota is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.)			
					W.	Tl.	Tr.	C.
22883	(?)	Tashgaon (Dras Valley, Kashmir).	Aug. 17, 1873	Dr. F. Stoliczka.	226	138	30	19
6032	♀	Dras (Kashmir).	June 23, 1870	1st Yarkand Exped.	230	130	32	17.5
17287	♀	Above Matayon (Kashmir).	Oct. 1, 1875	Dr. J. Scully.	235	145	31	20
17288	♂	Joth (Gilgit, Kashmir).	Oct. 14, 1875	Dr. J. Scully.	222	127	32	21.5
24247	(Juv.)	Dhasladhar Range, 13,000 ft. (Punjab).	Aug. 22, 1902	W. M. Cradock.	[227	138	29	22]
3993	♂	Kumaon (U. P.).	1867	"Riddell Mus."	242	142	32	19
3990	♂	Kumaon (U. P.)	(?)	Dr. F. Stoliczka.	246	(139)	29	19
3989	(?)	"Rakha in Bussahir" (= Bashahr State, N. E. Punjab).	Jan. 7, 1869	Mr. A. O. Hume.	221	..	28	15
3988	♂	Sikkim 12,000 ft. ..	Sept. 23, 1870	H. J. Elwes.	239	151	28	19
3991	(?)	Lachung Valley, 11,000 ft. (E. Sikkim).	Oct. 3, 1870	Mr. W. T. Blanford.	234	..	32	18
3987	♀	Chola Range 13,000 ft. (E. Sikkim).	Aug. 25, 1870	Mr. W. T. Blanford.	230	131	31	18
22882	(?)	"Sikkim"	June 28, 1875	W. E. Brooks.	236	143	32	19
12053	♂	Bhutan.	March 6, 1876	W. Rutledge.	..	..	32	20
12052	♂	Bhutan.	March 6, 1876	W. Rutledge.	208	..	31	21.5
12054	♀	(?)	March 12, 1877	W. Rutledge.	..	..	33	20
23982	(♀, Juv ?)	(?)	(?)	Zool. Gardens, Calcutta.	[232	137	33	18]

¹ "Birds from northern Kansu are referable to this race, *vide* F. Steinbacher *in litt.*" (Peters).

Remarks.—No. 23982 has the adult plumage, but differs from the other adults in the Indian Museum in the fact that its first primary is about 35 mm. shorter than the second and third, the latter two being subequal ; in all other adults the first primary is only 5-10 mm. shorter than the second.

I am unable to distinguish Bhutan and Sikkim skins in the Indian Museum from those obtained farther west.

Distribution.—"The Himalayas from western Afghanistan to Sikkim, where it intergrades with the next form [*i.e.*, *gradaria*] ; occurs in summer in the Alai Mountains¹ and the Pamirs in southwestern Turkestan" (Peters).

***Columba eversmanni* Bonaparte.**

(The Eastern Stock-Pigeon.)

1856. *Columba eversmanni*, Bonaparte, *C. R. Acad. Sci. Paris* XLIII, p. 838 (Western and Central Asia.)

1928. *Columba oenas eversmanni*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 226.

1937. *Columba eversmanni*, Peters, *Check-list Birds World* III, p. 61.

Columba eversmanni is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	TL.	Tr.	C.
24851	♀	Kuhak (Seistan, E. Iran).	April 28, 1905	J. W. N. Cumming.	190	107	24	18
14529	♀	Tirphul (N. W. Afghanistan).	April 23, 1885	Surg. Aitchison (Afghan Bound. Comm.).	195	108	26	18
14530	♀	Tirphul (N. W. Afghanistan).	April 22, 1885	Surg. Aitchison (Afghan Bound. Comm.).	195	108	29	18
14528	♂	Toman-Agha (N. W. Afghanistan).	April 25, 1885	Surg. Aitchison (Afghan Bound. Comm.).	200	108	27	17
14300	♂	Min Darakht (Afghanistan).	June 1, 1886	Capt. Yate (Afghan Bound. Comm.).	204	118	25	17
17293	♂	Yak Shamba Bazar (40 miles S. of Yarkand, E. Turkestan).	Aug. 1, 1875	Dr. J. Scully.	203	110	25	18
17295	♀ (Juv.)	Yak Shamba Bazar (40 miles S. of Yarkand, E. Turkestan).	Aug. 1, 1875	Dr. J. Scully.	[196	107	27	17·5]
17296	(Juv.)	Dras (Ladak, Kashmir).	Sept. 29, 1875	Dr. J. Scully.	[190	108	25	17]
6116	♂ (Juv.)	Chagrā (Ladak, Kashmir).	Oct. 8, 1870	Dr. G. Henderson.	[201	111	25	17]
3984	(?)	Sirsa District (Punjab).	(?)	Mr. A. O. Hume.	209	112	28	18
26520	(?)	Hansi (Hissar District, Punjab).	(?)	Dr. Scott (Asiat. Soc. Bengal).	202	116	(28)	18
14694	(?)	Kolassi (Purnea District, Bihar).	Jan., 14, 1886	H. Reilly.	198	99	26	20
3985	(?)	(?)	(?)	Dr. Fayrer.	199	113	27	17
3986	(?)	(?)	(?)	Dr. Fayrer.	201	104	27	16·5

¹ Stuart Baker's remark (1928, p. 224) that it breeds as far north as the Altai Mts. is probably wrong. The only records are from the Alai Mts. which lie considerably south of the Altai Mts.

Remarks.—Nos. 17295, 17296 and 6116 from Ladak appear to be juveniles. In No. 6116 the plumage is brownish instead of the grey of adults, and there is no metallic gloss on the neck and forebreast—Dr. Henderson (1873, p. 27) who obtained it had stated : “possibly a young bird” Nos. 17295 and 17296 are less brown, and the metallic gloss is partially present.

Distribution.—“Turkestan from the Aral Sea to northern Afghanistan and east to Zaissan-nor ; in winter to Sind, the southern Punjab, the United Provinces and Bihar” (Peters).

The distribution in Afghanistan and E. Turkestan calls for some remarks. Birds from Kandahar in S. Afghanistan are *eversmanni* (Ticehurst, 1927, p. 73). From the N. W. border of Afghanistan, west of Herat, there are some skins (Nos. 14528, 14529, 14530) in the Indian Museum which are typical *eversmanni*, not intermediate between *eversmanni* and *oenas* as Stuart Baker (1913, p. 149) opined. These three skins are from Tirphul (34° 30' N. lat. and 61° 30' E. long) ; and Toman-Agha (34° 52' N. lat. and 61° 2' E. long.).

***Columba palumbus* Linnaeus.**

The species ranges from W. Europe, south to N. Africa and *via* Asia Minor, Caucasus, Turkestan, Transcaspia, Palestine, Iraq and Iran to N. W. India (east up to Oudh) and the Himalayas (east up to Sikkim). Peters (1937, pp. 61, 62) admits six subspecies of which only *C. p. casiotis* occurs within the Indian limits.

***Columba palumbus casiotis* (Bonaparte).**

(The Eastern Wood-Pigeon or Ring-Dove¹ or Cushat.)

1849. *Columba (Palumbus) torquatus* (part, “variety in N. W. Himalayas”), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 233, No. 1413.

1854 (Dec. 11). *Palumbus casiotis*, Bonaparte, *C. R. Acad. Sci. Paris XXXIX*, p. 1103. (Chinese Tartary.)

1854. *Palumbus casiotis*, Bonaparte, *Consp. Gen. Av.*, p. 42. (Himalayas.)

1928. *Columba palumbus casiotis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 227.

1937. *Columba palumbus casiotis*, Peters, *Check-list Birds World III*, p. 227.

Columba palumbus casiotis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
17289	♂	Gilgit (Kashmir).	Oct. 15, 1879	Dr. J. Scully.	247	178	35	..
17292	♀	Dangor (Gilgit, Kashmir).	Nov. 11, 1879	Dr. J. Scully.	247	179	..	..
17291	Juv. ♀	Gilgit (Kashmir).	Oct. 22, 1879	Dr. J. Scully.	[227	142	29	22]
3982	(?)	N. Simla, (Punjab).	(?)	Dr. F. Stoliczka.	258	165	33	20.5
3983	(?)	Kumaon (U. P.).	1867	“Riddell Mus.”	253	199	32	20
9892	♂	Near Shiraz (S. Iran). [In oak forest, 6,000 ft.]	June 1870	Major St. John.	247	201	32	22
9893	Juv. ♀	Near Shiraz (S. Iran). [In oak forest, 6,000 ft.]	(?)	Major St. John.	[235	152	32	24]

¹ The name “Ring-Dove” is now used for *Streptopelia decaocto* (Frivaldsky)

Remarks.—In No. 9892 (Shiraz) the neck-patches are pale buff, conspicuously lighter than in *casiotis* from India but deeper than in *palumbus*.¹

Distribution.—"Turkestan and Zaissan, south to eastern Persia, Baluchistan², the Salt Range and the Himalayas east to Sikkim. Migrates in winter south to Sind, the Punjab and Oudh" (Peters).

***Columba elphinstonii* (Sykes).**

(The Nilgiri Wood-Pigeon.)

1833. *Ptilinopus Elphinstonii*, Sykes, *Proc. Comm. Zool. Soc. Lond.* (1832) II, p. 149. (The Ghats of Deccan.)

1849. *Columba (Palumbus) Elphinstonei*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 233, No. 1415.

1928. *Columba elphinstonii*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 228.

1937. *Columba elphinstonii*, Peters, *Check-list Birds World* III, p. 68.

Columba elphinstonii is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26522	(?)	Nilgiris (S. India).	1848	Dr. T. C. Jerdon.	199	(154)	(37)	17
26523	(?)	Nilgiris (S. India.)	1848	Dr. T. C. Jerdon.	186	158	34	18
23914	(?)	"High range" (N. E. Travancore).	(?)	Trivandrum Mus.	208	158	29	18

Distribution.—"Hill tracts of southwestern India from Mahabaleshwar to Cape Comorin" (Peters).

***Columba torringtoni* (Bonaparte).**

(The Ceylon Wood-Pigeon.)

1854 (Dec. 11). *Palumbus torringtoni*, "Layard", Bonaparte, *C. R. Acad. Sci. Paris* XXXIX, p. 1103. (Ceylon.)

1854. *Palumbus torringtoni*, Bonaparte, *Consp. Gen. Av.* II, p. 42. (Ceylon.)

1928. *Columba torringtonii*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 229.

1937. *Columba torringtoni*, Peters, *Check-list Birds World* III, p. 68.

Columba torringtoni is represented in the collection of the Indian Museum by the following skin :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26551	♂	Hakgalla (Ceylon). [Hill Zone.]	April 24, 1923	Colombo Mus., Ceylon.	180	(122)	26	18

Distribution.—"Confined to Ceylon" (Peters).

¹ Dr. C. B. Ticehurst said *in litt.* (Nov. 1940) that this difference is due to the fact the Shiraz birds were taken in June while the Indian birds were taken in winter.

² Stuart Baker (1928, p. 228) excludes Baluchistan. But Ticehurst (1927, p. 73; and 1930, p. 478) has shown that *casiotis* breeds in the juniper forests of northern Baluchistan; he also recorded a bird obtained as far south as Turbat in British Mekran on Nov. 27.

Genus **Alsocomus** Blyth.**Alsocomus puniceus** Blyth.

(The Purple Wood-Pigeon.)

1842. *Columba (Alsocomus) Puniceus*, "Tickell", Blyth, *Journ. Asiat. Soc. Bengal* XI, Pt. 1, p. 461. (Chyebassa, Burma.)
 1849. *Columba (Alsocomus) puniceus*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 233, No. 1411.
 1928. *Alsocomus puniceus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 232.
 1937. *Columba punicea*, Peters, *Check-list Birds World* III, p. 69.

Alsocomus puniceus is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
3976	♂	Manbhum (E. Bihar).	(?)	Lt. Beavan.	219	(144)	29	18
7642	♂	Midnapore (Lower Bengal)	About 1874	W. Rutledge.	(223)	151	28	19
3977	♂	Cachar (Assam).	(?)	"Mus. Coll."	237	(162)	31	19
25272	(?)	Kobo, 400 ft. (N. E. Assam).	Dec. 5, 1911	Dr. S. W. Kemp (Abor Exped. 1911-12).	222	152	29	16
12917	♂	Gna Islet (Mergui Archipelago, S. Burma).	Feb. 18, 1882	Dr. J. Anderson (Mergui Exped.).	223	154	28	17
12918	♂	Gna Islet (Mergui Archipelago, S. Burma).	Feb. 15, 1882	Dr. J. Anderson (Mergui Exped.).	222	(156)	27	18

Remarks.—No. 25272 was wrongly identified as *Ducula insignis insignis* (Hodg.) by Stuart Baker (1913a, pp. 286, 287, specimen b).

Distribution.—"Eastern Bengal, Assam, Laos, south to the northern part of the Malay Peninsula, Siam and southern Annam" (Peters).

Some further remarks are necessary with regard to its distribution. Jerdon (1864, p. 462) recorded it from the "eastern portion of Central India, extending to near the sea coast in Midnapore and possibly southwards towards Cuttack". Salvadori (1893, p. 397) listed a skin from "Central India", and included the "Eastern part of Central India" in its range, probably on Jerdon's authority. Blanford (1898, p. 38) included in its range S. E. Bihar (Manbhum and Singhbhum) and "as far west as Sirguja" (=Surguja State in Chota Nagpur, C. P.). In the Indian Museum, No. 3976 is from Manbhum, and No. 7642 from Midnapur (Lower Bengal). Finally, Stuart Baker (1913, p. 177) has included the Sundarbans within its range.

Layard (1854, p. 58) recorded it from Ceylon where it probably occurs as a rare straggler (not as a seasonal immigrant as suggested by some authors). Legge (1880, p. 696) once observed a flock in Ceylon in 1869. The bird has never been recorded from S. India, and its occasional occurrence in Ceylon is rather mysterious,

Genus **Janthoenas**¹ Reichenbach.**Janthoenas palumboides** (Hume).

(The Andaman Wood-Pigeon.)

1873. *Carpophaga palumboides*, Anonymous=Hume, *Str. Feath.* I, p. 302, (Port Mouat, S. Andaman Is.)
 1874. *Ianthoenas nicobarica*, Walden, *Ann. Mag. Nat. Hist.* (4) XIV, p. 157. (Trinkut and Nangcowry Islands, Nicobars.)
 1928. *Ianthoenas palumboides*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 233.
 1937. *Columba palumboides*, Peters, *Check-list Birds World* III, p. 69.

Janthoenas palumboides is represented in the collection of the Indian Museum by the following skin :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
23075	(?)	Andamans.	(?)	Capt. R. A. S. Anderson.	238	..	31	18

Distribution.—"Andamans and Nicobars" (Peters).

Genus **Dendrotreron** Hodgson.**Dendrotreron hodgsonii** (Vigors).

1832. *Columba Hodgsonii*, Vigors, *Proc. Comm. Zool. Soc. Lond.*, Pt. 2, p. 16. (Nepal.)
 1849. *Columba (Alsocomus) Hodgsonii*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 233, No. 1410.
 1928. *Dendrotreron hodgsonii*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 234.
 1937. *Columba hodgsonii*, Peters, *Check-list Birds World* III, p. 64.

Dendrotreron hodgsonii is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
17327	♂	Gilgit (Kashmir).	June 24, 1879	Dr. J. Scully.	226	155	..	18
17328	♀	Kergah (Gilgit, Kashmir).	June 23, 1879	Dr. J. Scully.	224	151	..	16.5
26524	♀	Simla (Punjab).	1849	Asiat. Soc. Bengal.	233	(155)	28	16
3974	(♀)	Kumaon (U. P.).	(?)	"Riddell Mus."	233	171	27	18
3975	(♀)	Darjeeling (N. Bengal).	Winter of 1869-70.	H. J. Elwes.	220	135	25	17
4728	(♂)	Katmandu (Nepal).	(?)	(?)	226	165	(28)	19.5

Distribution.—"Resident between 8000 and 13000 feet in the Himalayas from Kashmir to Assam and south to Burma and the Shan States; western China in southern Kansu, western Szechuan and western Yunnan" (Peters).

¹ The spelling given by Neave (*Nomenc. Zool.* II, p. 806, 1939) is *Janthoenas*, not *Ianthoenas* which Stuart Baker (1928, p. 233) has used.

Genus **Streptopelia** Bonaparte.**Streptopelia turtur** (Linnaeus).

The species ranges from W Europe and N. Africa to the whole of S. W Asia from the Khirgiz Steppes and Turkestan to Arabia, Iraq, Iran, Afghanistan and N. W India. Peters (1937, p. 89) admits five subspecies. Of these only *arenicola* occurs with certainty within the Indian limits. According to Stuart Baker (1913, p. 187 ; 1928, p. 236), *S. t. turtur* is a rare staggler in extreme N. W India but, as pointed out by Ticehurst (1930, p. 478), this contention is based on very slender and doubtful evidence.

Streptopelia turtur arenicola (Hartert).

(The Persian Turtle-Dove.).

1894. *Turtur turtur arenicola*, Hartert, *Novit. Zool.* I, p. 42. (Fao, S. Iran.)
Type was in Tring Mus., England ; now evidently in Amer. Mus. Nat. Hist.

1928. *Streptopelia turtur arenicola*, Stuart Baker, *Faun. Brit. Ind. Birds* (2nd ed.) V, p. 237.

1937. *Streptopelia turtur arenicola*, Peters, *Check-list Birds World* III, p. 89.

Streptopelia turtur arenicola is represented in the collection of the Indian Museum by the following skins :—

(a)

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
21574	(Juv. ♂)	Little Pamir (E. Turkestan).	(?)	Dr. Alcock (Pamir Bound. Comm.).	[175	116	23.5	16]
22887	(?)	Kashgar (E. Turkestan).	Dec. 16, 1873	Dr. F. Stoliczka.	169	123	22	17
22886	(?)	Yarkand (E. Turkestan).	May 23, 1874	Dr. F. Stoliczka.	174	123	23	16
17316	♂	Yarkand (E. Turkestan).	May 28, 1875	Dr. J. Scully.	174	120	23	17
17317	♂	Yarkand. ..	May 30, 1875	Dr. J. Scully.	171	130	22	19
17318	♂	Yarkand. ..	May 31, 1875	Dr. J. Scully.	174	118	23	..
17319	♂	Yarkand. ..	June 2, 1875	Dr. J. Scully.	175	123	22	17
17320	♂	Yarkand. ..	June 10, 1875	Dr. J. Scully.	174	(123)	25	18
17321	♀	Yarkand. ..	May 28, 1875	Dr. J. Scully.	169	127	21	17
22888	(?)	Kargalik, near Yarkand (E. Turkestan).	May 30, 1874	Dr. F. Stoliczka.	175	132	24	15.5

(b)

26520	♀	Gilgit, 5,000 ft. (Kashmir).	May 26, 1879	(?)	171	121	23	17
10433	♀ (Juv.?)	Near Shiraz (Iran).	July 1869	Capt. St. John.	[160	106	20	16]
9894	♂	Near Shiraz, 6,000 ft. (Iran).	June 1870	Major St. John.	171	120	22	16
9932	♂	Near Bám, 2,500 ft. (Murmanshir, S. E. Iran).	April 19, 1872	Dr. W. T. Blanford.	162	123	22	16
10282	(?)	(?)	(?)	Dr. W. T. Blanford. (Persian Coll.)	171	(122)	21	16

Remarks.—Hartert (1920, p. 1486) and Stuart Baker (1928, p. 237) state that birds from southern Iran, Turkestan (east up to Kashgar and Yarkand), Afghanistan, Baluchistan, Iráq, etc. are paler and smaller than the typical birds, *S. t. turtur*, from Europe. The wing-length given is 163-177 mm. (Hartert) and 161-181 mm. (Stuart Baker), while for the typical race *turtur* the figures are 163-182 mm. but mostly 173-178 mm. (Hartert) and 165-184 mm. (Stuart Baker); *arenicola* is generally regarded as smaller than *turtur*.

Hartert (1894, p. 42), who first separated the southern Iranian birds into a separate race *arenicola*, had stated that "the birds from Yarkand might also be distinguished subspecifically", but later (1920, p. 1486) he regarded the Yarkand birds as *arenicola*.

The Turkestan and Iranian birds in the Indian Museum fall into separate groups [Tables (a) and (b) above], the Iranian birds being markedly paler and smaller, as shown by the following measurements (mm.):—

		Wing	Tail	Tarsus	Culmen
E. Turkestan	5♂♂:	171-175	118-130	22-25	17-19
	1♀:	169	127	21	17
	3 o?:	169-175	123-132	22-24	15.5-17
Iran	2♂♂:	162-171	123-129'	22	16
	1 o?:	171	(122)	21	16

No. 26529 from Gilgit resembles the Iranian birds in plumage. Having no typical European birds for comparison, I cannot go further into the question.

Distribution.—"Breeds in northern Africa from Morocco to Tripoli; in southwestern Asia from the Kirghíz Steppes to Turkestan south to Iraq, Persia, Afghanistan and Yarkand. Recorded as a migrant in Egypt, Yemen, and the Danakil country, and as wintering in north-western India" (Peters).

***Streptopelia orientalis* (Latham).**

The species ranges from Siberia in the north to Iran and India in the south, and China, Japan, Formosa and Hainan Island in the east. Peters (1937, pp. 89, 90) admits five subspecies. Of these, three occur within the Indian limits. Koelz (1939, p. 81) recently created a sixth race, *sylvicola*, based on six specimens from Castle Rock, Bombay Presidency. From Koelz's description, *sylvicola* seems hardly separable from *agricola* Tickell.

The uncertainty of the nomenclature of two of the three subspecies occurring within the Indian limits has led to considerable confusion in the past. Among those who have discussed the question from various angles are the following:—Hartert (1916, p. 80; 1920, pp. 1488-1490), Hartert & Steinbacher (1936, p. 458), Rothschild (1926, p. 223), Ticehurst (1930, p. 478), Ludlow & Kinneer (1934, pp. 97, 98) and, finally, Whistler & Kinneer (1936, pp. 677-679). Ludlow & Kinneer have finally settled the question of nomenclature, while Whistler & Kinneer have given an excellent summary of the distribution of the subspecies in India,

The three main views on nomenclature are summarised below :—

Common name.	Under tail-coverts.	Subspecific name.		
		View No. 1. (Correct one —adopted in present account.)	View No. 2. (Adopted by Stuart Baker in <i>Faun. Brit. Ind.</i>)	View No. 3.
1. Rufous Turtle-Dove.	Pale dove-grey	<i>orientalis</i> Latham.	<i>orientalis</i> Latham.	<i>orientalis</i> Latham.
2. Northern Indian Rufous Turtle-Dove.	White	<i>meena</i> Sykes.	<i>ferrago</i> Eversmann.	<i>ferrago</i> Eversmann.
3. Indian Rufous Turtle-Dove.	Dark grey	<i>agricola</i> Tickell.	<i>meena</i> Sykes.	<i>agricola</i> Tickell.

***Streptopelia orientalis orientalis* (Latham).**

(The Rufous Turtle-Dove.)

1790. *Columba orientalis*, Latham, *Index Orn.* II, p. 606. (China, *ex* Sonnerat.)

1849. *Turtur orientalis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 236, No. 1436.

1928. *Streptopelia orientalis orientalis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 238.

1937. *Streptopelia orientalis orientalis*, Peters, *Check-list Birds World* III, p. 89.

Streptopelia orientalis orientalis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
25387	♂	Mipi, 8,500 ft. (Mishmi Hills, N. E. Assam).	March 9, 1913	Capt. R. S. Kennedy.	197	141	29	16
20913	♂	Foochow (S. E. China).	Oct. 1870	C. B. Rickett.	194	138	29	19

Remarks.—The bird is stated by some to be common in the hills of Yunnan up to about 7,000 feet (*vide* Rothschild 1926, p. 233). Rothschild refers to some of Anderson's specimens. There are in the Indian Museum two of Anderson's skins labelled *Turtur gelastes* Tem., one from "Ponsee", W Yunnan (April 11, 1868) and another from "Katha Up. Burma" (January 19, 1868)—both are *agricola* (Tickell) as listed below (p. 332). However, Rothschild refers one of Anderson's skins from Ponsee (♂, March 1868) to *S. o. orientalis*, although Anderson had referred it to *meena*. The statement of Stanford & Ticehurst (1939, p. 215) that "Anderson's records nominally from Yunnan, are really from Burma" is not quite correct since some of Anderson's skins of the Rufous Turtle-Doves were from Yunnan (see p. 332).

Distribution.—"Breeds from central Siberia, Transbaikalia, Amurland and Island of Sakhalin south to the Himalayas, northern

Assam, Yunnan Kwangtung and Island of Kiusiu. Winters over the greater part of eastern India, Indo-Chinese countries, southern China, the Japanese Islands, Formosa and Hainan " (Peters).

***Streptopelia orientalis meena* (Sykes).**

(The Northern Indian Rufous Turtle-Dove.)

1832. *Columba Meena*, ♂, Sykes, *Proc. Comm. Zool. Soc. Lond.* II, p. 149. (Deccan.)
 1842. *Columba ferrago*, Eversmann, *Addenda Pallas Zoogr. Rosso-Asiat.*, fasc. 3, p. 17. (Songaria and mountains of Tarbagati, Mongolia.)
 1928. *Streptopelia orientalis ferrago*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 239.
 1937. *Streptopelia orientalis meena*, Peters, *Check-list Birds World* III, p. 90.

Streptopelia orientalis meena is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector. or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
22890	(?)	" S. W. of Egisya " (= Ighizyar) (E. Turkestan).	May 18, 1874	Dr. F. Stoliczka.	193	139	27	16
14301	(Juv.?)	Chilik (Afghan Turkestan, not Iran).	July 2, 1886	Capt. Yate (Afghan Bound. Comm.).	[166	118	23	16]
17297	♂	Sharot (Gilgit, Kashmir).	April 28, 1879	Dr. J. Scully.	193	140	28	..
17298	♀	Gilgit (Kashmir).	May 1, 1879	Dr. J. Scully.	197	141	27	16
22884	(?)	Chiliscambo (Ladak, Kashmir).	Aug. 18, 1873	Dr. F. Stoliczka.	185	126	23	15
17299	♀	" Singal, Punjal " (? Gilgit, Kashmir).	May 27, 1879	Dr. J. Scully.	189	(140)	24	18
6401	♂	Kangan, near Srinagar (Kashmir).	June 15, 1870	Dr. G. Henderson. (Forsyth's First Yarkand Exped.).	184	(139)	25	17
6105	♂	Kangan, near Srinagar (Kashmir).	June 15, 1870	(Forsyth's First Yarkand Exped.).	188	138	27	16
4064	(?)	Kyelang (or Keylang) Lakul (? Kangra District), (Punjab).	(?)	Dr. F. Stoliczka.	189	127	26	16
17315	♂	Kansrao (Dehra Dun District, United Provinces).	April 2, 1870	(Mr. G. Ki or Dr. J. Scully?).	187	148	27	17
11804	♀	" Bhoura " (= Bavda), 2,500 ft. (Kolhapur State, Bombay Pres.).	April 7, 1878	Surg. J. Armstrong.	183	135	25	15
11802	♂	" Bhoura " (= Bavda), 2,500 ft.	April 8, 1878	Surg. J. Armstrong.	189	140	27	16
11359	♂	" Bhoura " (= Bavda), 2,500 ft.	April 10, 1878	Surg. J. Armstrong.	190	137	28	17
11264	♀	" Bhoura " (= Bavda), 2,500 ft.	April 10, 1878	Surg. J. Armstrong.	188	134	25	18
11803	♂	" Bhoura " (= Bavda), 2,500 ft.	April 11, 1878	Surg. J. Armstrong.	101	142	27	16.5
11263	♀	" Bhoura " (= Bavda), 2,000 ft.	April 11, 1878	Surg. J. Armstrong.	180	131	26	15
11360	♂	" Bhoura " (= Bavda), 1,500 ft.	April 19, 1878	Surg. J. Armstrong.	184	133	27	..
11138	♂	" Bhoura " (= Bavda), 2,500 ft.	April 19, 1878	Surg. J. Armstrong.	188	131	26	17

Remarks.—Hartert (1920, p. 1490) gave the wing-length as 187-202 mm., mostly about 195 mm. Stuart Baker's (1928, p. 240) figures are : "169-200 mm., but nearly always over 175 mm." In the 17 adult skins in the Indian Museum, the wing measures 180-197 mm., the majority being grouped closely around 188-189 mm.

Distribution.—"Breeds in the southern part of western Siberia east to the western Altai; Turkestan, Persia, Afghanistan, Kashmir and the Himalayas east to western Nepal. Winters over the whole of western and southern India" (Peters).

The following further remarks are necessary.

The bird does not occur over the whole of W India—it avoids the desert areas of Sind and Rajputana.

Ticehurst (1927, p. 73) has recorded two birds on passage (October 1 and June 3) from Quetta in Baluchistan.

Whistler & Kinnear (1936, pp. 677, 678) have quoted several records from the western and eastern coast of Peninsular India down to about lat. 12°N.; in the Indian Museum there are several Armstrong skins (April 7-19) from the Kolhapur State in the Bombay Presidency. Below 12°N. lat., there are no records from the mainland of India.

It occurs as a winter straggler in Ceylon (Wait, 1931, p. 296)¹.

There is a skin, No. 17315 (April 2), in the Indian Museum from the Dehra Dun District, U. P. There are several records from Bihar where it is said to be common in winter.

Stuart Baker's statement (1913, p. 200) that it is certainly an occasional straggler in Dhubri (Assam) needs confirmation.

Another statement of Stuart Baker (1928, p. 240) that "Rothschild accepts Anderson's record of this race from Yunnan" is incorrect. Rothschild (1926, pp. 223, 234) does not accept it as a Yunnan bird at all. Neither Mayr (1938, p. 317) nor Stanford & Ticehurst (1939, pp. 215, 216) have recorded it from N. Burma where the race *orientalis*, and not *meena*, is found.

The Indian distribution may thus be summed up as follows :—Breeds in Kashmir and the Himalayas east up to western Nepal where it intergrades with the darker race, *agricola* Tickell; breeding birds (intermediates?) may occasionally be found in the plains of Bihar. Winters in the whole of India (excluding the desert areas of Sind and Rajputana, etc.) east up to Bihar. Migrating birds met with in Baluchistan. Stragglers occur in Ceylon in winter.

***Streptopelia orientalis agricola* (Tickell).**

(The Indian Rufous Turtle-Dove.)

1833. *Columba Agricola*, Tickell, *Journ. Asiat. Soc. Bengal* II, p. 581. (Jungles of Borabhum and Dholbhum, Bihar.)

1928. *Streptopelia orientalis meena*, Stuart Baker, *Faun. Brit. Ind. Birds* (2nd ed.) V, p. 240.

1937. *Streptopelia orientalis agricola*, Peters, *Check-list Birds World* III, p. 90.

¹ Stuart Baker (1930, p. 689) has wrongly referred this record to *S. o. agricola*, see foot-note on p. 332.

Streptopelia orientalis agricola is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
14918	♂	Kendrapara (Orissa).	Aug. 1888	"Mus. Coll."	176	134	27	15
14919	♀	Kendrapara (Orissa).	Aug. 1888	"Mus. Coll."	173	124	26	15.5
4063	(?)	Manbhum (Bihar).	(?)	Lt. Beavan.	174	118	27	18
25751	♀	Kurn (Ranchi District, Bihar).	Oct. 22, 1927	Dr. S. C. Law.	185	..	27	18
25530	(?)	Jessore (E Bengal).	(?)	T. C. Tweedie.	168	133	26	16
24582	♂	South Sylhet (Assam).	(?)	C. B. Antram.	163	110	25	17
8272	♀	Thayetmyo (Burma).	May 24, 1877	Dr. F. Stoliczka.	182	139	27	18
23221	♀	Kalaw, 4,300 ft. (S. Shan States, Burma).	Nov. 23, 1899	Col. C. T. Bingham.	184	140	25	18
23223	♀	Banque (S. Shan States, Burma).	Dec. 20, 1899	Col. C. T. Bingham.	175	131	26	17
9085	(?)	Katha (Upper Burma).	Jan. 19, 1868	Dr. J. Anderson.	184	..	33	(17)
9084	(?)	Ponsee, 3,300 ft. (Kakhyen Hills, Yunnan).	April 11, 1868	Dr. J. Anderson.	188	142	27	16

Remarks.—Rothschild (1926, pp. 223, 234) accepted Anderson's record of this race from Yunnan. He wrote that an Anderson skin of "*Turtur gelastes*" from Tsitkaw (February 1875) in the British Museum is "*meena*" (= *agricola* Tickell). In the Indian Museum there are two Anderson skins, No. 9084 (Ponsee, Kakhyen Hills, W Yunnan, April 11) and No. 9085 (Katha, Upper Burma, January 19) labelled *Turtur gelastes*; they are *agricola* Tickell. These records, and that of Andrews & Heller (*vide* Rothschild, *loc. cit.*) from Ho-mu-shu Pass, W Yunnan, April 17, would suggest the inclusion of S. W Yunnan within the range of *agricola*.

Distribution.—"Resident in northeastern India in Bihar, Orissa and Bengal; southern Assam, and Burma south to Tenasserim" (Peters).

On the basis of the remarks given above, S. W. Yunnan may be included within its range.

In winter it may straggle as far south-west as Mahabaleshwar, Bombay Presidency (Stuart Baker, 1928, p. 241).

The statements of Whistler (1928, p. 302) and Stuart Baker (*loc. cit.*) that the bird breeds both in the Deccan and Central Provinces is, so far as I know, not supported by actual records.

Stuart Baker's (1930, p. 689) statement that Wait has recorded it from Ceylon is incorrect¹.

***Streptopelia decaocto* (Frivaldszky).**

The species ranges from Hungary *via* S. E. Europe, Iran, India and Turkestan to China and Japan in the east. Peters (1937, p. 92) admits

¹ The only Turtle-Dove which Wait (1931, p. 296) records as occurring in Ceylon is *ferrago* Evers. (= *meena* Syk.) with white under tail-coverts,

three subspecies of which two occur within the Indian limits (*vide* also Roonwal, 1940, pp. 437-452). Ticehurst (1929, pp. 7-10) has suggested that *S. decaocto* (Frivaldszky) should perhaps retain the older name *S. risoria* (Linnaeus).

***Streptopelia decaocto decaocto* (Frivaldszky).**

(The Indian Ring-Dove.)

[1758. ?*Columba risoria*, Linnaeus, *Syst. Nat.* (10th ed.) I, p. 165. (India.)

Considered by some as applying to domesticated forms only.]

1838. *Columba risoria* Linn., variety *decaocto*, Frivaldszky, *K. magyar tudós Társaság Evkönyvi* III, Pt. 3, p. 183. (Turkey.)

1849. *Turtur risorius* (part ?), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 235. (Part habitat, N. Africa, *errore* ?)

1928. *Streptopelia decaocto decaocto* (part), Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 248.

1937. *Streptopelia decaocto decaocto*, Peters, *Check-list Birds World* III, p. 92.

1940. *Streptopelia decaocto decaocto*, Roonwal, *Rec. Ind. Mus.* XLII, p. 440.

Streptopelia decaocto decaocto is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
24588	♂	Khwaja Ahmad (Seistan, E. Iran).	May 7, 1905	J. W. N. Cumming.	(164)	140	23	16
9980	♀ (Juv.?)	Pishin (Baluchistan).	Feb. 10, 1872	Mr. W. T. Blanford.	[161	128	23	15]
17322	♂	Mt. Abu (Rajputana).	May 22, 1868.	Mr. S. King.	167	(135)	23	..
25733	♀	Rajadara (Ranchi District, Bihar).	Oct. 18, 1927	Dr. S. C. Law.	173	143	23	16
25739	♀	Chandwa (Ranchi-Palamau border, Bihar).	Oct. 22, 1927	Dr. S. C. Law.	168	139	23	16
4058	(?)	Manbhum (E. Bihar).	(?)	" Mus. Coll."	167	133	24	15
4060	(?)	Manbhum (E. Bihar).	(?)	" Mus. Coll."	176	148	25	17
4061	(?)	Singhbhum (E. Bihar).	(?)	Mr. V. Ball.	175	140	27	16
4338	(?)	Nepal.	(?)	(?)	172	140	..	16
4059	♂	Nagpur (Central Provinces).	(?)	Mr. W. T. Blanford.	171	150	24	17
4062	(?)	S. E. Berar. ..	(?)	Mr. W. T. Blanford.	161	131	22	15
11902	♂	Phonda (Ratnagiri District, Bombay Presidency).	May 23, 1878	Surg. J. Armstrong.	161	136	25	(13)
18442	♀	Near Bangalore (Mysore State).	(?)	" Mus. Coll., Jaffa."	160	132	22	15.5
26533 ¹	(Juv.?)	Calcutta. ..	(1842-45)	Asiat. Soc., Bengal.	[155	..	23	18]

¹ This is No. 1430 *H* of Blyth's *Catal. Birds Mus. Asiat. Soc. Bengal*, pp. 235, 236 (1849), where it is described as "Young. (White race)", under *Turtur risorius*. The plumage of the specimen is entirely white. I have included this identification on Blyth's authority.

Remarks.—Stuart Baker (1928, p. 248) included under *S. d. decaocto* the E. Turkestan birds also; the latter are really *S. d. stoliczkae* Hume (see p. 351).

The Indian specimens of *S. d. decaocto* in the Indian Museum give a wing-length of 160-176 mm., average 168 mm.

Distribution.—"Resident from Hungary over southeastern Europe, Asia Minor, Turkestan, northern China and Japan, south to Palestine, Iraq, Persia, India, Ceylon and western China. A pale variety found under domestication" (Peters).

***Streptopelia decaocto xanthocyclus* (Newman).**

(The Burmese Ring-Dove.)

1906. *Turtur decaocto xanthocyclus*, Newman, *Avicult. Mag.* (N. S.) IV, p. 324 and fig. 1 of plate. (Minbu and Mangue Districts, Upper Burma.)

1928. *Streptopelia decaocto xanthocyclus*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 249.

1937. *Streptopelia decaocto xanthocyclus*, Peters, *Check-list Birds World* III, p. 82.

1940. *Streptopelia decaocto xanthocyclus*, Roonwal, *Rec. Ind. Mus.* XLII, p. 449.

Streptopelia decaocto xanthocyclus is represented in the collection of the Indian Museum by the following skin:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
9064	(?)	"Upper defile Irrawady", about 40 miles below Bhamo (N. Burma).	Sept. 1868	Dr. J. Anderson.	182	151	27	(17)

Remarks.—The single Anderson skin in the Indian Museum agrees with Anderson's description (1879, p. 666) in that the "colour generally is darker and more vivid than in Indian specimens of the species (*S. d. decaocto*), and the collar is larger and more crescentic."; it is also "decidedly larger" (*vide* Roonwal, 1940).

Distribution.—"Burma, Shan States, Yunnan and eastern China (lower Yangtse Valley and Fohkien" (Peters).

***Streptopelia chinensis* (Scopoli).**

The species extends from W. India (excluding Sind and the Punjab), to China, Formosa and the Philippines in the east, and south to Ceylon, the Malay Peninsula and the East Indies. Peters (1937, pp. 97, 98) admits eight subspecies of which four occur within the Indian limits.

***Streptopelia chinensis suratensis* (Gmelin).**

(The Indian Spotted Dove.)

1789. *Columba suratensis*, Gmelin, *Syst. Nat.* I, Pt. 2, p. 778. (Surat, Bombay Presidency, ex Sonnerat, *Voy. Indes* II, p. 179.)

1849. *Turtur suratensis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 236, No. 1435.

1928. *Streptopelia chinensis suratensis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 242.

1937. *Streptopelia chinensis suratensis*, Peters, *Check-list Birds World* III, p. 97.

Streptopelia chinensis suratensis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
17308	♀ (Juv.)	Dangor (Gilgit, Kashmir).	Nov. 11, 1879	Dr. J. Scully.	[133	125	22	15.5]
17309	♀ (Juv.)	Gilgit (Kashmir). ..	Nov. 26, 1879	Dr. J. Scully.	[125	117	22	..]
17306	♂ (Juv.)	Gilgit (Kashmir). ..	Dec. 18, 1879	Dr. J. Scully.	[135	(134)	24	16]
17310	♀	Gilgit (Kashmir). ..	Feb. 4, 1880	Dr. J. Scully.	130	146	(20)	15.5
17300	♀ (Juv.)	Chattar (Kashmir). ..	Oct. 17, 1875	Dr. J. Scully.	[130	(120)	..	15]
22892	(?)	Changligally, near Murree (Rawalpindi, District, Punjab).	July 6, 1873	Dr. F. Stoliczka.	130	(139)	22	16
22891	(?)	Ghari (Punjab ?).	July 20, 1873	Dr. F. Stoliczka.	137	132	24	..
17304	♂ (Juv.)	"Residency Grounds" [Katmandu] "Nepal Valley".	Feb. 4, 1878	Dr. J. Scully.	[128	119	22	14.5]
17301	♂	Katmandu (Nepal).	April 19, 1877	Dr. J. Scully.	144	139	24.5	15.5]
17302	♂	Katmandu (Nepal).	May 2, 1877	Dr. J. Scully.	137	145	20	15
17305	♀	"Residency Grounds" [Katmandu] "Nepal Valley".	June 28, 1877	Dr. J. Scully.	133	144	22	15
5186	(?)	Katmandu (Nepal).	(?)	(?)	140	137	24.5	16
17303	♂	Thankot (Nepal).	Sept. 2, 1877	Dr. J. Scully.	137	(157)	24	16
4032	(?)	Darjeeling (N. Bengal).	(?)	Dr. J. Anderson.	127	145	18	..
4031	♂	Darjeeling (N. Bengal).	(?)	Dr. J. Anderson.	136	136	23	(14)
4034	(?)	"Darjeeling Terai" (N. Bengal).	(?)	Dr. J. Anderson.	130	127	23	15
26445	(?)	Gish (Jalpaiguri District, N. Bengal).	Nov. 22, 1938	Zool. Survey of India.	137	142	25	16
4044	♂	Moisraka (Midnapore Dist., W. Bengal).	Jan. 3, 1870	Mr. J. Wood-Mason.	136	(148)	23	16
4045	(?)	Midnapore (W. Bengal).	Jan. 4, 1870	Mr. J. Wood-Mason.	142	162	23	16.5
25673	(?)	Ranaghat (Nadia Dist., Bengal).	Aug. 28, 1927	Mr. A. Rahim.	138	154	25	14.5
4037	(?)	Calcutta.	Aug. 1, 1867.	"Mus. Coll."	132	(146)	24.5	14
4035	♂	Calcutta.	Oct. 1867	Dr. J. Anderson.	132	133	23	14
26398 (Mounted in gallery).	♂	Ind. Mus. garden, Calcutta.	Mar. 2, 1938	Mr. R. V. Sherard.	139	133	..	17
26532	♂	Pulta Water Works, 17 miles N. of Calcutta.	Oct. 6, 1939	Dr. M. L. Roonwal.	132	144	25	15
24567	♀	South Sylhet (Assam).	(?)	C. B. Antram.	141	147	24	15
24586	♂	South Sylhet (Assam).	(?)	C. B. Antram.	134	143	22	(15)
24592	(?)	South Sylhet (Assam).	(?)	C. B. Antram.	137	143	23	15
4041	♀	Singhbhum (Bihar).	Feb. 26, 1869	Mr. V. Ball.	137	145	25	16.5

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
25755	♂	Angara (Ranchi District, Bihar).	Oct. 12, 1927	Dr. S. C. Law.	134	142	23	15
4039	♂	" Chota Nagpur." ..	Dec. 1868	Mr. V. Ball.	140	..	23	15
4046	♀	West of Chanda (Central Provinces).	Jan. 1, 1870	Mr. W. T. Blanford.	135	137	22	14
17311	♀	Mt. Abu (Rajputana).	Jan. 1, 1868	Mr. S. King.	136	127	23	15
17312	♀	Mt. Abu (Rajputana).	Apr. 27, 1868	Mr. S. King.	138	137	23	15.5
18318	(?)	Ahmadabad (Gujrat).	(?)	H. E. M. James.	140	(140)	22	16
11362	♂	Waghotan (= Vaghotan) (Ratnagiri District, Bombay Pres.).	Mar. 1, 1878	Surg. J. Armstrong.	132	157	23	..
11086	♀	Waghotan (= Vaghotan) (Ratnagiri District, Bombay Pres.).	Feb. 28, 1878	Surg. J. Armstrong.	(135)	148	22	..
11905	♂	" Bhoura " (= Bavda), 2,500 ft. (Kolhapur State, Bombay Presidency).	Mar. 27, 1878	Surg. J. Armstrong.	133	139	24	..
11453	♂	" Bhoura " (= Bavda), 2,000 ft.	Apr. 3, 1878	Surg. J. Armstrong.	138	146	24	16
11903	♂	" Bhoura " (= Bavda), 2,000 ft.	Apr. 3, 1878	Surg. J. Armstrong.	136	145	24	..
11365	♂	" Bhoura " (= Bavda), 2,000 ft.	Apr. 3, 1878	Surg. J. Armstrong.	133	134	23	15
22893	♀	" Bhoura " (= Bavda), 2,000 ft.	Apr. 3, 1878	Surg. J. Armstrong.	137	143	24	16
11363	♂	" Bhoura " (= Bavda), 2,000 ft.	Apr. 4, 1878	Surg. J. Armstrong.	134	144	22.5	15
11904	♀	" Bhoura " (= Bavda), 2,000 ft.	Apr. 7, 1878	Surg. J. Armstrong.	132	140	22	..
11364	♀	" Bhoura " (= Bavda), 2,000 ft.	Apr. 7, 1878	Surg. J. Armstrong.	132	137	24	15
11085	♂ (Juv.?)	" Bhoura " (= Bavda), 2,000 ft.	Apr. 10, 1878	Surg. J. Armstrong.	123	116	22	..
18543	♂	Near Bangalore (Mysore State).	(?)	" Mus. Coll. Jaffa."	135	139	24	15
18544	♀	Near Bangalore (Mysore State).	(?)	" Mus. Coll. Jaffa."	137	(136)	22	15.5
23924	♂	Deviculum (Travancore).	Feb. 1892	Trivandrum Mus.	130	136	22	14
23925	(?)	Deviculum (Travancore).	Feb. 1892	Trivandrum Mus.	128	130	21.5	11
1043	(?)	" Travancore." ..	(?)	(Purchased.)	127	139	23	13
4042	(?)	" Travancore." ..	(?)	(Purchased.)	127	127	23	16
4040	♂	Chasri (?).	1865	Dr. F. Stoliczka.	138	(141)	24	16
22894	(Juv.)	(?)	(?)	(?)	134	..	(24)	16]
24512	(?)	(?)	(?)	(?)	134	(128)	22	15

Distribution.—" All of India (but absent from a large area of Sind and Punjab) and in the Himalayas up to 7,000 feet ; birds from Cachar and Manipur form the transition to *S. c. tigrina* and those from Travancore tend towards *S. c. ceylonensis*. Introduced into Mauritius " (Peters).

***Streptopelia chinensis tigrina* (Temminck).**

(The Burmese Spotted Dove.)

1810. *Columba Tigrina*, Temminck, in Knip, *Les Pigeons* I, p. 94, pl. 43.
(Timor and Batavia in E. Indies. According to Hartert, 1920, p. 1491,
the type in the Paris Museum is from Java.)

1928. *Streptopelia chinensis tigrina*, Stuart Baker, *Faun. Brit. Ind., Birds*
(2nd ed.) V, p. 244.

1937. *Streptopelia chinensis tigrina*, Peters, *Check-list Birds World* III, p. 98.

Streptopelia chinensis tigrina is represented in the collection of the
Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
8271	♀	Thayetmyo (Burma).	Dec. 21, 1871	Dr. F. Stoliczka.	132	139	23	13
4047	(?)	Burma.	(?)	Dr. Williams.	145	157	25	16
9067	(?)	Upper Burma. . .	Jan. 1868	Dr. J. Anderson.	149	162	24	15
9068	(?)	Upper Burma. . .	Jan. 14, 1868	Dr. J. Anderson.	147	155	27	16
9069	♂	Yayleytau (Upper Burma).	Jan. 5, 1875	Dr. J. Anderson.	140	147	25	14.5
9077	♂	Ava (Upper Burma).	Oct. 4, 1868	Dr. J. Anderson.	147	169	25	16.5
9078	(?)	Ava (Upper Burma).	Oct. 4, 1868	Dr. J. Anderson.	147	153	23	14
9079	(?)	Katha (Upper Burma).	Jan. 19, 1868	Dr. J. Anderson.	139	140	25	14
9070	(?)	"Bhaman" (= Bhamo?) (Upper Burma).	Sept. 8, 1868	Dr. J. Anderson.	147	149	24	16
9071	(?)	"Bhaman" (= Bhamo?) (Upper Burma).	Sept. 11, 1868	Dr. J. Anderson.	141	162	27	17
9072	(?)	"Bhaman" (= Bhamo?) (Upper Burma).	Sept. 3, 1868	Dr. J. Anderson.	141	155	25	16
9074	(?)	"Bhaman" (= Bhamo?) (Upper Burma).	Feb. 1868	Dr. J. Anderson.	141	160	24	16
9075	(?)	"Bhaman" (= Bhamo?) (Upper Burma).	Feb. 28, 1868	Dr. J. Anderson.	149	149	26	15
9076	(?)	"Bhaman" (= Bhamo?) (Upper Burma).	Oct. 7, 1868	Dr. J. Anderson.	141	141	24	14
9066	(?)	Tapeng (Upper Burma).	Mar. 1, 1868	Dr. J. Anderson.	147	155	25	17
9082	(?)	Ponsee (Kakhyen Hills, W. Yunnan, China).	Mar. 16, 1868	Dr. J. Anderson.	137	138	24	15
9083	(?)	Ponsee, 3,300 ft. (Kakhyen Hills, W. Yunnan, China).	Mar. 14, 1868	Dr. J. Anderson.	147	140	22	15
9081	(?)	Muangla-Sanda Valley, 3,000 ft. (W. Yun- nan, China).	May 18, 1868	Dr. J. Anderson.	143	139	23	14.5
9080	(♂)	Momien, 5,500 ft. (W. Yunnan, China).	June 5, 1868	Dr. J. Anderson.	157	155	28	15

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
8115	♂	Meetan (=Mitan) (Amherst District, S. Burma).	Jan. 1, 1877	"Tenasserim Exped."	145	149	22	16.5
8116	♂	Houngdaraw River (Amherst District, S. Burma).	Jan. 29, 1877	"Tenasserim Exped."	144	..	27	15
8117	♀ (Juv.)	Houngdaraw River (Amherst District, S. Burma).	Feb. 27, 1877	"Tenasserim Exped."	[136	128	25	17]
12913	(?)	"Taing" (Mergui, S. Burma).	Jan. 31, 1882	Dr. J. Anderson.	138	152	25.5	15.5
12915	♂	"Yeemuku" (Mergui, S. Burma).	Jan. 24, 1882	Dr. J. Anderson.	148	(160)	26	15
4048	(?)	Wellesly Prov. (Malay Penin.).	(?)	(Purchased.)	139	146	27	16
13460	(Juv.)	Malacca (Malay Penin.).	(?)	Bengal Eco- nomic Mus.	[(137)	135	22	14]
13459	(Juv.)	Malacca (Malay Penin.).	(?)	Bengal Eco- nomic Mus.	[133	..	25	..] (Head missing.)

Remarks.—I have included a few birds from W Yunnan under *tigrina*, as I am unable to separate these from the *tigrina* obtained from all over Burma. Some authors refer W Yunnan birds to the race *forresti* which, however, is considered by Peters (1937, p. 98) as doubtfully distinct from *tigrina*.

Distribution (of *tigrina* 'senu stricto').—"Eastern Bengal, Burma, Malay Peninsula, Indo-Chinese countries, Palawan, Borneo, Sunda Islands from Sumatra to Babar. Introduced into Celebes, small islands in the Flores Sea, and the Moluccas" (Peters).

***Streptopelia chinensis ceylonensis* (Reichenbach).**

(The Ceylonese Spotted or Ash Dove.)

1851. *Turtur ceylonensis*, Reichenbach, *Vollst. Natursyst., Tauben*, pl. 253b, figs. 3373, 3374. (Ceylon.)

1928. *Streptopelia chinensis ceylonensis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 245.

1937. *Streptopelia chinensis ceylonensis*, Peters, *Check-list Birds World* III, p. 97.

Streptopelia chinensis ceylonensis is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26549	♂	Passara (Ceylon). [Hill Zone.]	Dec. 3, 1920	Colombo Mus., Ceylon.	129	129	24	15
26550	♂	Hakgalla (Central Prov., Ceylon). [Hill Zone.]	Apr. 24, 1924	Colombo Mus., Ceylon.	127	129	19	15.5

Distribution.—"Ceylon" (Peters).

***Streptopelia senegalensis* (Linnaeus).**

The species ranges over the whole of Africa ; farther east it occurs in Arabia, Palestine, Syria, Asia Minor, and thence to Iran, Afghanistan, Russian Turkestan and practically the whole of India (excluding the extreme eastern portion of the mainland, and also excluding Burma and Ceylon). Peters (1937, pp. 98-100) admits nine subspecies of which only one, *cambayensis*—two, *cambayensis* and *ermanni*, according to some—occurs within the Indian limits.

The trivial name calls for some comment. The African races go under the name "Laughing Doves" Since the type-locality of the species is in Africa, it is desirable that all races should follow a trivial nomenclature identical to that of the African races. In Indian ornithological literature, however, this dove is called the "Little Brown Dove" which, for the above reason, should be changed to "Laughing Dove"

***Streptopelia senegalensis cambayensis* (Gmelin).**

(The Indian Laughing Dove or Indian Little Brown Dove.)

1789. *Columba cambayensis*, Gmelin, *Syst. Nat.* I, p. 779. ("Cambaya", i.e., Gulf of Cambay, W. coast of India).
 1849. *Turtur senegalensis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 237, No. 1438.
 1928. *Streptopelia senegalensis cambayensis* and *S. s. ermanni* (part), Stuart Baker, *Faun. Brit. Ind., Birds* (2nd. ed.) V, pp. 246, 247.
 1937. *Streptopelia senegalensis cambayensis*, Peters, *Check-list Birds World III*, p. 99.

Streptopelia senegalensis cambayensis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Dpnor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
17313	♂	Gilgit (Kashmir).	Jan. 27, 1880	Dr. J. Scully.	125	116	..	12.5
4065	(?)	Simla (Punjab)	(?)	Dr. F. Stoliczka.	129	..	22	13
18317	(?)	Ahmadabad (Gujrat).	(?)	H. E. M. James.	126	122	20	15
4066	(?)	Manbhum (E. Bihar).	(?)	"Mus. Coll."	121	(117)	21	13
4067	(?)	Manbhum (E. Bihar).	(?)	"Mus. Coll."	119	..	19	14
4068	♂	S. E. Berar, West of Chanda (Central Provinces).	Jan. 18, 1870	Mr. W. T. Blanford.	123	(111)	20	15
11644	♀	"Bhaura" (= Bavda), 2,200 ft. (Kolhapur State, Bombay Presidency).	Mar. 26, 1878	Surg. J. Armstrong.	123	..	18	14
18441	♂	Near Bangalore (Mysore State).	(?)	"Mus. Coll., Jaffa."	124	114	20	13.5
18542	♀	Near Bangalore (Mysore State).	(?)	"Mus. Coll., Jaffa."	124	113	20	14
9933	♀	Bampur, 2,000 ft. (Baluchistan).	Apr. 5, 1872	Mr. W. T. Blanford.	127	117	21	13.5

Remarks.—The two Baluchistan skins, Nos. 9933 and 9934, are indistinguishable from the rest, and are *cambayensis*, not *ermanni*.

Distribution.—"Eastern Persia, Baluchistan and the greater part of India" (Peters).

Genus **Oenopopelia** Blanford.

Oenopopelia tranquebarica (Herman).

This, the only species of the genus, ranges over the whole of S. E. Asia, *e.g.*, from E. Afghanistan (Meinertzhagen, 1938, p. 710) and Sind in the west, through the whole of India and Ceylon, *via* N. E. Tibet, Yunnan, Burma and the Andaman Islands to Siam (not the Malay Peninsula), Indo-China, the whole of China (straggling up to Japan) to the northern Philippines, Hainan and Formosa; once also found on the coast of British N. Borneo (Hartert & Steinbacher, 1936, p. 460). Peters (1937, p. 97) admits three subspecies all of which occur within the Indian limits.

Oenopopelia tranquebarica tranquebarica (Herman).

(The Indian Red Turtle-Dove.)

1804. *Columba tranquebarica*, Herman, *Obs. Zool.*, p. 200. ("Tranquebaria", India.)

1849. *Turtur humilis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 236, No. 1432.

1928. *Oenopopelia tranquebarica tranquebarica*, Stuart Baker, *Faun. Brit. Ind. Birds* (2nd ed.) V, p. 250.

1937. *Streptopelia tranquebarica tranquebarica*, Peters, *Check-list Birds World* III, p. 97.

Oenopopelia tranquebarica tranquebarica is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
4051	♂	Agra (United Provinces).	(?)	"Riddell Mus."	134	99	20	13
4052	♂	Agra (United Provinces).	(?)	"Riddell Mus."	134	(94)	18	13.5
4054	♂	Nagpur (Central Provinces).	(?)	Mr. W. T. Blanford.	131	98	19	14
4057	♂	S. E. Berar.	(?)	Mr. W. T. Blanford.	137	..	19	13
18546	♀	Near Bangalore (Mysore State).	(?)	"Mus. Coll., Jaffa."	135	90	19	14

Distribution.—"India from Sind and the Punjab east to western Nepal, Bihar and Bengal" (Peters).¹

¹ Layard (1854, p. 60) once recorded a small colony of "*Turtur humilis*" breeding in the Jaffna Peninsula in Ceylon. This is the sole record from Ceylon. Stuart Baker (1928, p. 250), Wait (1931, p. 298) and Phillips (1941, pp. 207, 211) refer Layard's Ceylon record to *O. t. tranquebarica* and not to *O. t. humilis*, but I cannot say how far they are right in doing so.

For the following reasons, the western limit given above needs extension. Whistler (1928, p. 308) stated that it occurs in the North-West Frontier Province. Later, Whistler (1930, p. 271) recorded typical *tranquebarica* as a summer visitor in the Rawalpindi District (extreme N. W Punjab). Meinertzhagen (1938, p. 710) observed this dove (subspecies not given, but presumably *S. t. tranquebarica*) at Jalalabad in E. Afghanistan on May 31st. The range should, therefore, be extended as far west as Jalalabad.

***Oenopopelia tranquebarica murmensis* Hartert.**

(The Sikkim Red Turtle-Dove.)

1920. *Oenopopelia tranquebarica murmensis*, Hartert, *Vögel paläarkt. Fauna* II, p. 1499. (Eastern Himalayas, i.e., Nepal and Sikkim.)
 1928. *Oenopopelia tranquebarica murmensis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 252.
 1937. *Streptopelia tranquebarica murmensis*, Peters, *Check-list Birds World* III, p. 97.

Oenopopelia tranquebarica murmensis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26545	♂	Jalpaiguri District (N. Bengal).	Feb. 27, 1934	Mr. C. M. Inglis.	146	113	20	14
26516	♀	Jalpaiguri District (N. Bengal).	Feb. 11, 1929	Mr. C. M. Inglis.	135	..	21	14

Distribution.—" Eastern Nepal, Sikkim, and Assam north of the Brahmapootra " (Peters).

The two Indian Museum skins from the Jalpaiguri District (N. Bengal) would appear to be nearer to *murmensis* than to *tranquebarica*, but I have no typical *murmensis* to compare with.

***Oenopopelia tranquebarica humilis* (Temminck).**

(The Burmese Red Turtle-Dove.)

1824. *Columba humilis*, ♂, Temminck, *Pl. Color d'Oiseaux*, livr. 44, p. 287 and pl. 259 (but not pl. 258). (Bengal, India ; and Luzon Is., Philippines.) Although labelled as ♀, the specimen figured in pl. 259 is really ♂.
 1849. *Turtur humilis* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 236, No. 1432.
 1928. *Oenopopelia tranquebarica humilis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 251.
 1937. *Streptopelia tranquebarica humilis*, Peters, *Check-list Birds World* III, p. 97.

Oenopopelia tranquebarica humilis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
24585	(♂)	Sylhet (Assam). ..	(?)	C. B. Antram.	133	89	19	14
24577	♀	S. Sylhet (Assam). ..	(?)	C. B. Antram.	128	88	20	14
24576	♀	S. Sylhet (Assam). ..	(?)	C. B. Antram.	132	..	18	13
8268	♂	Thayetmyo (Central Burma).	Dec. 14, 1871	Dr. F. Stoliczka.	145	98	20	13
8269	♀	Thayetmyo (Central Burma).	Dec. 14, 1871	Dr. F. Stoliczka.	133	93	20	..
8270	♀	Thayetmyo (Central Burma).	(?)	Dr. F. Stoliczka.	136	91	21	14
25940 (Mount- ed in gallery.)	♀	" Aberdeen " (Anda- mans).	1930	Zool. Survey of India.	(137)	(98)	21	16
20910	♂	Foochow (E. China).	May 1891	C. B. Rickett.	145	97	20	14.5
20911	(♀)	Foochow (E. China).	Apr. 1891	C. B. Rickett.	133	91	52	15
20912	(♀)	Foochow (E. China).	Apr. 1891	C. B. Rickett.	139	94	20	13
4056	(♂)	S. W. Formosa. ..	(?)	R. Swinhoe.	145	93	21	14
4055	(♀)	S. W. Formosa. ..	(?)	R. Swinhoe.	134	82	22	13
26537 ¹	(♀)	(?)	(?)	(?)	131	..	21	13.5

¹ On the label this specimen bears the Indian Museum Registered No. 24622, and the following additional particulars: "*Turtur humilis*, S. Sylhet". However, in the I. M. Bird Register No. IV of the Zoological Survey of India (Indian Museum), the bird listed against the above number is the Roller "*Eurystomus orientalis*, ♀, S. Sylhet, Purchased (C. B. Antram)", and, corresponding to this, there is in the Indian Museum collection a specimen of *E. orientalis* bearing a similar label and number. The data given on the label of the Dove have, therefore, to be rejected, and the Dove has been given a new Reg. No., 26537.

Distribution.—"Greater part of southeastern Asia from northeastern Tibet and northern China, south to Assam, Burma, Andaman Islands, Siam, Indochina and the northern Philippines. Migratory in the northern part of its range, locally resident in the southern part" (Peters).

Subfamily *MACROPYGIINAE*.

Genus *Macropygia* Swainson.

Macropygia unchall (Wagler).

The species ranges from Kashmir in the west and along the Himalayas to the hills of Burma extending to N. Siam, French Indo-China, S. E. China and the Island of Hainan. South it extends *via* the Malay Peninsula to Sumatra, Java and Lombok. Peters (1937, pp. 75, 76) admits three subspecies of which one, *tusalia*, occurs within the Indian limits.

Macropygia unchall tusalia (Blyth).
(The Bar-tailed Cuckoo-Dove.)

1843¹. *Columba tusalia* "Hodgson", Blyth, *Journ. Asiat. Soc. Bengal* XII, Pt. 2, p. 936. (Darjeeling, N. Bengal.)

1849. *Macropygia leptogrammica*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 235, No. 1424.

1928. *Macropygia unchall tusalia*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd. ed.) V, p. 253.

1937. *Macropygia unchall tusalia*, Peters, *Check-list Birds World* III, p. 75.

Macropygia unchall tusalia is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
4012	(♂)	Darjeeling (N. Bengal).	(?)	T. R. Doucett.	195	199	25	15
4013	(♂)	Darjeeling (N. Bengal).	(?)	T. R. Doucett.	196	193	26	..
4007	(♀)	Darjeeling (N. Bengal).	(?)	T. R. Doucett.	184	191	22	15
26495	♀	Darjeeling (N. Bengal).	1843	Mrs. Saxon (Asiat. Soc. Bengal).	191	..	26	16
4016	(♀)	Darjeeling Terai (N. Bengal).	(?)	Dr. Anderson.	184	(186)	24	16.5
4015	(Juv. ♂?)	Darjeeling Terai (N. Bengal).	(?)	Dr. Anderson.	194	216	25	16
4017	(♀)	Darjeeling Terai (N. Bengal).	(?)	Dr. Möller.	193	170	25	15
26494	♀	Manipur State (E. Assam).	Feb. 11, 1936	Zool. Survey of India.	177	174	24	16

Remarks.—No. 26495 (Darjeeling) was listed by Blyth (1849, p. 235, No. 1424 B) as *Macropygia leptogrammica* Temminck.

Distribution.—“The Himalayas from Kashmir and Garhwal east to Assam and perhaps to western Szechuan, south in the hills to Burma and the Shan States” (Peters).

De Schauensee (1934, p. 273) recently secured in January immature females, suggesting breeding, at Chieng Dao (4,500 feet) in N. W Siam; he found the bird there “not uncommon”

Macropygia rufipennis Blyth.
(The Nicobar Cuckoo-Dove².)

1846. *Macropygia rufipennis*, Blyth, *Journ. Asiat. Soc. Bengal* XV, p. 371. (Southern Nicobars.)

1849. *Macropygia rufipennis*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 234, No. 1422.

¹ Stuart Baker (1928, p. 253) wrongly gives the first reference as: “*Coccyzura tusalia* Hodgs., J. A. S. B., XIV, p. 809 (1843) (Nepal).” The whole reference is wrong, even apart from the question of priority—volume, page, year and author are all confused, and the above reference does not exist.

Stuart Baker (1930, p. 442) is again wrong in giving Blyth's reference. He wrongly gives *Macropygia* as a subgenus of *Columba*. Blyth wrote: “*Columba (Macropygia, Swainson) [tusalia, Hodgson.]*”, no doubt meaning that his *Columba tusalia* would be referable to genus *Macropygia* Swainson. The date is clearly 1843, not “1843.44” as given by Stuart Baker.

² This name is preferable to “The Andaman Cuckoo-Dove” employed by Stuart Baker (1928, p. 255) for, the type-locality is the Nicobars, not the Andamans.

1928. *Macropygia rufipennis*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 255.

1937. *Macropygia rufipennis*, Peters, *Check-list Birds World* III, p. 80.

Macropygia rufipennis is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26491 (Lecto-type).	(♀)	Nicobars. ..	(1846)	Capt. Lewis & Rev. J. Barbe (Asiat. Soc. Bengal).	188	194	29	17
26492 (Syn-type).	(♀)	Nicobars. ..	(1846)	Capt. Lewis & Rev. J. Barbe (Asiat. Soc. Bengal).	193	202	(28)	16
26493 (Syn-type).	(♀)	Nicobars. ..	(1846)	Capt. Lewis & Rev. J. Barbe (Asiat. Soc. Bengal).	187	..	28	(19)
4008	(♀)	Andamans. ..	(?)	Dr. G. E. Dobson.	181	183	24.5	..
4009	(♂)	Andamans. ..	(?)	Dr. G. E. Dobson.	191	(188)	27	16
4010	(♂)	Andamans. ..	(?)	Dr. G. E. Dobson.	195	216	27	17
4011	(♂)	Andamans. ..	(?)	Dr. G. E. Dobson.	190	175	23	18

Remarks.—Each of the three skins, Nos. 26491, 26492 and 26493, bears the label “Type No. 1422, *Macropygia rufipennis* Blyth, A, B, C, Nicobars, Capt. Lewis and Rev. J. Barbe, 1846, A. S. B.” Obviously they are the three specimens listed by Blyth (1849, p. 234, No. 1422, A, B, C) as *Macropygia rufipennis* (specimens from Nicobar Islands, presented by Capt. Lewis & Rev. J. Barbe, 1846). Presumably also, Blyth gave his original description of the species (1846, pp. 371, 372) from one of these three specimens. They may, therefore, be regarded as Syntypes. Among these, No. 26491 is the best preserved, and I, therefore, select it as the Lectotype.

In Nos. 4009 and 4011 the tail is markedly shorter than the wings : the specimens look normal in other respects.

I cannot find any difference between birds from the Andamans and the Nicobars.

Distribution.—“Andaman and Nicobar Islands” (Peters).

Family CLARAVISIDAE.

Subfamily GEOPELINAE.

Genus **Geopelia** Swainson.

Geopelia striata (Linnaeus).

The species extends from southern Tenasserim in Burma, through the Malay Peninsula and the East Indies to the whole of Australia. Peters (1937, pp. 100, 101) admits five subspecies of which *striata* alone is found within the Indian limits.

***Geopelia striata striata* (Linnaeus).**

(The Barred Ground-Dove.)

1766. *Columba striata*, Linnaeus, *Syst. Nat.* (12th ed.) I, p. 282. ("India orientali"; restricted to Malacca by Chasen, 1935, and to Java by Peters, 1937.)
 1849. *Geopelia striata*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 235, No. 1428.
 1928. *Geopelia striata striata*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 258.
 1937. *Geopelia striata striata*, Peters, *Check-list Birds World III*, p. 100.

Geopelia striata striata is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
4069	(?)	Wellesley Prov. (Malay Penin.).	1870	(Purchased.)	98	113	20	13
26561	♀	Nong Koh (Ghirbi, Peninsular Siam).	Jan. 3, 1918	Raffles Mus. Singapore.	100	105	19	13
24004	(Juv.)	Bred in aviary at Calcutta.	1902	Major A. Alcock.	..	...	..	..

Distribution.—“Southern Tenasserim southward over the Malay Peninsula ; Luzon and occasionally other islands in the Philippines ; Borneo, Sumatra, Java and Lesser Sunda Islands to Lombok. Introduced into Madagascar and other islands in the western Indian Ocean ; St. Helena ; Hawaiian Islands ; its presence in southern Celebes and Ambonia is believed to be due to introduction also ” (Peters).

Subfamily *PHABINAE*.Genus ***Chalcophaps*** Gould.***Chalcophaps indica* (Linnaeus).**

The species ranges from India *via* Malaya, S. China and the East Indies to Australia. Peters (1937, pp. 114, 115) accepts ten subspecies of which three, *indica*, *maxima* and *robinsoni*, occur within the Indian limits.

***Chalcophaps indica indica* (Linnaeus).**

(The Indian Emerald or Bronze-winged Dove.)

1758. *Columba indica*, Linnaeus, *Syst. Nat.* (10th ed.) I, p. 164. ("India orientali"; restricted to Calcutta by Stuart Baker, 1928, p. 215.)
 1849. *Chalcophaps indicus* (part), Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 237, No. 1440.
 1928. *Chalcophaps indica indica* (part), Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 215.
 1937. *Chalcophaps indica indica*, Peters, *Check-list Birds World III*, p. 114.

Chalcophaps indica indica is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
13520	(♂)	Malacca (Malay Penin.).	(?)	Bengal Economic Mus.	140	(96)	25	15
13468	(♀)	Malacca (Malay Penin.).	(?)	Bengal Economic Mus.	142	95	27	15
4077	♂	Welesley Province (Malay Penin.).	1870	Asiat. Soc. Bengal. (Purchased.)	145	97	26	17
4074	♀	Welesley Province (Malay Penin.).	(?)	Asiat. Soc. Bengal. (Purchased.)	131	93	25	15
12919	♂	Pilai (Mergui, S. Burma).	Mar. 4, 1882	Dr. J. Anderson.	134	(84)	27	16.6
12920	♂	Pilai (Mergui, S. Burma).	Mar. 5, 1882	Dr. J. Anderson.	147	(105)	28	15
9088	♀	Katha (Upper Burma).	Jan. 19, 1868	Dr. J. Anderson.	147	(98)	27	16
9079	(Juv. ♂)	Cachar (Assam). ..	(?)	"Mus. Coll."	[135	87	26	19]
4078	♂	Darjeeling (N. Bengal).	Apr. 3, 1869	Mr. Muller.	144	95	26	16
25675	♂	Ranaghat (Nadia District, Bengal).	Aug. 20, 1927	Mr. A. Rahim.	145	104	26	17
4071	♀	Bengal.	(?)	(?)	139	95	25.5	16
18119	♂	Shevaroy Hills, (Salem District, Madras Presidency).	May 16, 1869	W. Daly.	144	95	25	16
23939	(♀)	Talayai (Travancore).	Jan. 1892	Trivandrum Mus.	146	99	26	17
4075	(♀)	Travancore.	(?)	Asiat. Soc., Bengal. (Purchased.)	138	94	25	(17)

Remarks.—No. 23939 is labelled as a "♂" by the collector, but has the plumage of a ♀. Stuart Baker (1928, p. 216) gives the wing-length as 146-161 mm. In the Indian Museum collection, some birds have very much shorter wings, thus: No. 4071, ♀, Bengal, 139 mm.; No. 12919, ♂, Pilai (Mergui), 134 mm.; No. 4074, ♀, Welesley Province (Malay Penin.), 131 mm.

Distribution.—"Kashmir, Bengal, Assam, Tonkin¹, Hainan and the Riu Kiu Islands south over India, Burma, Malay Peninsula, Indochina, the Philippines, Borneo and Celebes to the Great Sunda Islands, and the Lesser Sunda chain to Alor and Sumba; Moluccas and extreme western Papuan Islands (Gebe and Koffiao)" (Peters).

The following remarks are necessary with regard to the Indian range :—Ticehurst (1930, p. 477) has pointed out that the record of its occurrence in Kashmir seems to be incorrect. On the western coast it extends from Travancore to the Salsette Island near Bombay. On the eastern side it is said to occur from Bihar and Orissa, south to the Nelliampathy and the Shevaroy hills, and is fairly common all over Peninsular India.

¹ "Recorded from Yunnan and western Szechuan by David; it has not been taken in these provinces by collectors in the present century" (Peters).

***Chalcophaps indica maxima* Hartert.**

(The Andaman Emerald or Bronze-winged Dove.)

1928. *Chalcophaps indica indica* (part), Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 215.1931. *Chalcophaps indica maxima*, Hartert, *Orn. Monatsb.* XXXIX, p. 145. (Golapabung, S. Andamans.)1937. *Chalcophaps indica maxima*, Peters, *Check-list Birds World* III, p. 114.*Chalcophaps indica maxima* is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
4072	(Juv. ?) ♂	Andamans. ..	(?)	Dr. G. E. Dobson.	[153]	(100)	31	[19]
4073	(Juv.)	Andamans. ..	(?)	Dr. G. E. Dobson.	[143]	86	29	[18]

Remarks.—No. 4072 is labelled as a “♀” by the collector, but has the plumage of a juvenile ♂—the male plumage is quite clear on the head, mantle and breast, but the white patch on the wing is not yet well developed.

Distribution.—“Andaman Islands” (Peters).

***Chalcophaps indica robinsoni* Stuart Baker.**

(The Ceylon Emerald or Bronze-winged Dove.)

1928. *Chalcophaps indica robinsoni*, Stuart Baker, *Bull. Br. Orn. Club* XLVIII, p. 58. (Cocawatte Estate, Ceylon.)1928. *Chalcophaps indica robinsoni*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 217.1937. *Chalcophaps indica robinsoni*, Peters, *Check-list Birds World* III, p. 114.*Chalcophaps indica robinsoni* is represented in the collection of the Indian Museum by the following skins :—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
26553	♂	Higara (or Hujara) (South Province, Ceylon) [Wet Zone].	May 20, 1932	Colombo Mus., Ceylon.	137	(90)	25	15
26552	♀	Udugama (South Province, Ceylon) [Wet Zone].	Aug. 21, 1905	Colombo Mus., Ceylon.	137	87	25	16

Distribution.—“Ceylon” (Peters).

Subfamily *CALAENADINAE*.Genus ***Caloenas*** G. R. Gray.***Caloenas nicobarica*** (Linnaeus).

This, the only species of the genus, occurs in the greater part of the Indo-Australian region from the Nicobars and the Mergui Archipelago

eastward to the Solomon Islands. Peters (1937, p. 139) admits two subspecies; of these, only *nicobarica* occurs within the Indian limits.

***Caloenas nicobarica nicobarica* (Linnaeus).**

(The Nicobar Pigeon.)

1758. *Columba nicobarica*, Linnaeus, *Syst. Nat.* (10th ed.) I, p. 164. (Nicobar Islands.)

1849. *Caloenas nicobarica*, Blyth, *Catal. Birds Mus. Asiat. Soc. Bengal*, p. 238, No. 1444.

1928. *Caloenas nicobarica nicobarica*, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.) V, p. 213.

1937. *Caloenas nicobarica nicobarica*, Peters, *Check-list Birds World* III, p. 139.

Caloenas nicobarica nicobarica is represented in the collection of the Indian Museum by the following skins:—

Reg. No.	Sex.	Locality.	Date.	Collector or Donor.	Measurements (mm.).			
					W.	Tl.	Tr.	C.
5941	♂	Nicobars. ..	Oct. 7, 1870	W. Rutledge.	254	103	45	25
6875	(?)	Nicobars. ..	July 1873	H. D. Cooper.	225	(97)	48	25
5940	♀	Nicobars. ..	Sept. 22, 1871	Lady Mayo.	245	93	47	23
5942	♂	Nicobars. ..	Feb. 27, 1871	W. Rutledge.	247	91	48	26
26473	(Juv.)	Nicobars. ..	1846	Capt. Lewis.	[240	..	44	22]
4094	♀	Andamans. ..	July 2, 1867	(Purchased.)	244	91	43	26
18346	♀ (Juv.)	Andamans. ..	(?)	G. H. Booley.	[249	..	45	24]
14094	(?)	Gregory Is. (Mergui Archipelago, S. Burma).	(?)	Dr. G. M. Giles.	255	95	49	25
14095	(?)	Gregory Is. (Mergui Archipelago, S. Burma).	(?)	Dr. G. M. Giles.	245	79	50	22
23159	♂	(Purchased at Calcutta.)	(?)	Mr. F. Finn.	199	77	43	23
25975 (Mounted in gallery.)	♂	(?)	Nov. 27, 1929	Zool. Gardens, Calcutta.	252	96	(43)	23

Remarks.—No. 26473 was listed by Blyth (1849, p. 238, No. 1444 C) as “young (black-tailed. .)”. Blyth (1846, p. 371), Robinson & Chasen (1936, p. 65), and others have stated that young birds have a greenish-black tail, instead of white as in adults. In the Indian Museum collection Nos. 26473 and 18346 have greenish-black tails, and are, therefore, young forms—in all others the rectrices are white.

Distribution.—“The greater part of the Indo-Australian region from the Nicobars and the Mergui Archipelago eastward over the Sunda Islands, Philippines, Celebes, Moluccas, Papuan Islands, New Guinea, Admiralty Islands, D’Entrecasteaux Archipelago; Trobriand Islands, and Louisiades, to the Solomon Islands. Wherever found occurs only on the small islands and on the islets off the larger land masses. Migrates between various groups of islands” (Peters).

(b) *EXTRA-INDIAN SPECIES.*

The following extra-Indian species and subspecies are listed in the present Catalogue :—

TRERONIDAE.**TRERONINAE.****Dendrophassa** Glog.

D. olax (Temm.), p. 350.

Vinago Cuv.

V. waalia (Gmel.), p. 350.

V. australis (Linn.) (subsp. ?), p. 350.

Treron Vieil.

T. curvirostra nasica Schl., p. 350.

PTILINOPINAE.**Ptilinopus** Swain.

P. jambu (Gmel.), p. 350.

P. perousii perousii Peale, p. 350.

P. ponapensis (Finsch) (subsp. ?), p. 351.

P. superbus superbus (Temm.), p. 351.

P. bellus (Sclat.), p. 351.

P. solomensis speciosus (Schl.), p. 351.

P. melanospila ?melanauchen (Salvad.), p. 351.

P. pectoralis (Wagl.) (subsp. ?), p. 351.

P. geelvinkiana (Schl.), p. 351.

Megaloprepia Reichenb.

M. magnifica puella (Less.), p. 351.

DUCULINAE.**Muscadivora** Schl.

M. aenea (Linn.) (subsp. ?), p. 351.

M. aenea (Linn.) (subsp. ?), p. 351.

M. perspicillata (Temm.) (subsp. ?), p. 352.

Hemiphaga Bonap.

H. novaeseelandiae (Gmel.) (subsp. ?), p. 352.

COLUMBIDAE.**COLUMBINAE.****Columba** Linn.

C. livia livia Gmel., p. 352.

C. oenas oenas Linn., p. 352.

C. oenas yarkandensis Butur., p. 353.

C. albitorques Rüpp., p. 353.

C. palumbus palumbus Linn., p. 353.

C. guinea dilloni (Bonap.), p. 353.

C. norfolciensis Lath., p. 353.

Streptopelia Bonap.

S. orientalis (Lath.) (subsp. ?), p. 353.

S. lugens lugens (Rüpp.), p. 353.

S. decaocto stoliczkae Hume, p. 354.

S. roseogrisea arabica (Neum.), p. 354.

S. semitorquata semitorquata (Rüpp.), p. 354.

S. chinensis chinensis (Scop.), p. 354.

S. senegalensis senegalensis (Linn.), p. 354.

MACROPYGIINAE**Macropygia** Swain.

M. ruficeps malayana Chas. & Kl., p. 354.

M. ruficeps (Temm.) (subsp. ?), p. 354.

M. phasianella phasianella (Temm.), p. 354.

CLARAVISIDAE.**GEOPELINAE.****Geopelia** Swain.

G. striata maugeus (Temm.), p. 355.

G. striata placida Gould, p. 355.

G. striata tranquilla Gould, p. 355.

PHABINAE.**Oena** Swain.

O. capensis capensis (Linn.), p. 355.

Turtur Bodd.

T. abyssinicus abyssinicus (Sharpe), p. 355.

Chalcophaps Gould.

C. indica chrysochlora (Wagl.), p. 356.

Phaps Selby.

P. chalcoptera chalcoptera (Lath.), p. 356.

P. chalcoptera (Lath.) (subsp. ?), p. 356.

P. elegans neglecta Math., p. 356.

Ocyphaps Gray.

O. lophotes (Temm.), p. 356.

Geophaps Gray.

G. scripta (Temm.) (subsp. ?), p. 356.

GEOTRYGONINAE.**Leucosarcia** Gould.

L. melanoleuca (Lath.), p. 356.

Family **TRERONIDAE**.Subfamily **TRERONINAE**.Genus **Dendrophassa** Gloger.**Dendrophassa olax** (Temminck).

(The Little Green Pigeon.)

Five skins—three from the Wellesley Province and Malacca in the Malay Peninsula, and two from Sarawak, Borneo.

Genus **Vinago** Cuvier.**Vinago waalia** (Gmelin)¹.

(Bruce's Fruit or Green Pigeon.)

Five skins from various places in Eritrea. Collected by Mr. W. T. Blanford in 1868 and listed by him (1870, p. 418) as *Treron abyssinica*.

Vinago australis (Linnaeus) (subsp. ?).

One skin from Madagascar.

Genus **Treron** Vieillot.**Treron curvirostra nasica** Schlegel.

(The Borneo Lesser Thick-billed Green Pigeon.)

Three skins from Sarawak, Borneo.

Subfamily **PTILINOPINAE**.Genus **Ptilinopus** Swainson.**Ptilinopus jambu** (Gmelin).

(The Pink-headed Fruit Dove.)

Thirteen skins—six from the Malay Peninsula, one from Banguara in Peninsular Siam (July 8, 1926), and six from unknown localities.

Peters (1937, p. 38) does not include Siam in its range. Besides other records, there is the above skin from Peninsular Siam in the Indian Museum.

Ptilinopus perousii perousii Peale.

Two skins, Nos. 26479 and 26480, from Samoa (Navigator) Islands, S. Pacific; they are Nos. 1397*A* and *B* respectively of Blyth (1849, p. 231). Blyth regarded *A* as adult and *B* as young; actually both are adults—*A* is ♀ and *B* ♂.

¹ Peters (1937, p. 22) assigns the authorship of the species to F. A. A. Meyer 1793, but Gmelin 1791 has priority.

Ptilinopus ponapensis (Finsch) (subsp. ?).

One skin, No. 26478, from Ladrone (Marianne) Islands, S. Pacific. It was listed by Blyth (1849, p. 231, No. 1396 *A*) who wrongly identified it as *P. purpuratus* Temminck.

Ptilinopus superbus superbus (Temminck).

(The Purple-crowned Fruit Dove.)

Three skins from New South Wales, Australia.

Ptilinopus bellus (Sclater).

One ♂ from Hatam, Arfak, Dutch New Guinea.

Ptilinopus solomensis speciosus (Schlegel).

One ♂ from Korido, Musauri or Mysori Is., Geelvink Bay, New Guinea.

Ptilinopus melanospila ?melanauchen (Salvadori).

One ♂ from Java.

Ptilinopus pectoralis (Wagler) (subsp. ?).

One ♀ from Amberbaken, Dutch New Guinea.

Ptilinopus geelvinkiana (Schlegel).

One ♂ from Pulo-Manin Is., Geelvink Bay, New Guinea.

Genus **Megaloprepia** Reichenbach.

Megaloprepia magnifica puella (Lesson).

One ♂ from Amberbaken, New Guinea.

Subfamily *DUCULINAE*.

Genus **Muscadivora** Schlegel.

Muscadivora aenea (Linnaeus) (subsp. ?).

No. 23811 from an unknown locality. Wing 213, tail 153, tarsus 34, culmen 26 mm. In its wing-length and certain other characters it resembles *M. a. pusilla*, but differs in the virtual absence of the vinous colour on the abdomen and the forebody. The under tail-coverts are chestnut.

Muscadivora aenea (Linnaeus) (subsp. ?).

No. 26471 from an unknown locality. Donor : "Batavian Society", 1845. Wing 219, tail 145, tarsus 27, culmen 23 mm.

The skin closely resembles *M. a. sylvatica* except that the grey of the forebody and venter is rather darker and with hardly any vinaceous; the wing-length is also slightly shorter.

It was listed by Blyth (1849, p. 231, No. 1400 *A*) as “*Carpophaga ianthiana* (?)” Blyth wrote: “Syn. *Col. ianthiana* (?). Temminck (*Pl. Col.* 503)” ; no locality was given. It is not clear why Blyth quoted this synonymy even with a query. The specimen figured by Temminck, *Pl. Color d’ Oiseaux* IV, 1823, pl. 503 as “*Colombe violette*”, and described by him on p. 257 under *Columba janthiana* (not *ianthiana*) Temm., has no resemblance to the specimen in the Indian Museum. Besides, Temminck’s specimen came from Japan where *M. aenea* does not occur.

Muscadivora perspicillata (Temminck) (subsp. ?).

One skin from an unknown locality.

Genus **Hemiphaga** Bonaparte.

Hemiphaga novaeseelandiae (Gmelin) (subsp. ?).

Two skins from the Bank Peninsula, New Zealand.

Family COLUMBIDAE.

Subfamily COLUMBINAE.

Genus **Columba** Linnaeus.

Columba livia livia Gmelin.

(The Blue Rock Pigeon.)

Four skins—one from “Europe”, two from England ; and a fourth, No. 26567, (“L. Bengal”, *errore* ?) is mounted in the gallery and bears the label: “1417 *D. Columba intermedia* Strickl.” Under this number, Blyth (1849, p. 234) wrote: “.no white on rump” Actually there is a white rump about 55 mm. broad and the specimen resembles *C. l. livia*. Evidently Blyth’s labelling was faulty.

There is also a specimen mounted in the gallery and bearing the label “1417*A* a variety of domestic pigeon”; this is evidently the specimen listed by Blyth (*loc. cit.*, No. 1417 *A*). It is about twice the size of the normal wild bird. Colour: head and neck metallic green tinged with copper ; remaining portions white speckled with black.

According to Stuart Baker (1928, p. 220), *C. livia livia* is a straggler in N. W. India. But Ticehurst (1930, p. 477) has given reasons to show that its range does not extend to India.

Columba oenas oenas Linnaeus.

(The European Stock Pigeon.)

Three skins—two from England and one ♀, No. 14527, from Karagh (about 34° 50’ N. lat. and 61° 45’ E. long.) in N. W. Afghanistan

(collected by Surgeon J. Aitchison, Afghan Boundary Commission, Nov. 28, 1884). The Afghanistan skin is indistinguishable from the two skins from England, but is separable from the Yarkand skins, *yarkandensis*, in that the latter are paler and larger. The Afghanistan skin measures : wing 219, tail 123, tarsus 32, culmen 18 mm.

Columba oenas yarkandensis Buturlin.

Four skins—three from Yarkand in E. Turkestan and one ♀, No. 14299, from “Chahar Shamba” (= ?Chahar Sada) in N. W. Afghanistan (collected by Capt. Yate, 1886). The Afghanistan skin measures : wing 223, tail 130, tarsus 30, culmen 17 mm. It is inseparable from the Yarkand skins.

Columba albitorques Rüppell.

(The White-collared Pigeon.)

Two skins from Senafe, 7,500 feet, in Tigre, S. Eritrea. Collected by Mr. W. T. Blanford in 1868.

Columba palumbus palumbus Linnaeus.

(The European Wood-Pigeon or Ring-Dove¹.)

Two skins from England.

Columba guinea dilloni (Bonaparte).

(The Abyssinian Speckled Pigeon.)

Five skins—three from Tekoonda, Halai and Badraket in Tigre in N. Abyssinia, and two from Mahbar on R. Lebka in Habab, Eritrea. Collected by Mr. W. T. Blanford in 1868.

Columba norfolciensis Latham.

(The Australian White-headed Fruit Dove.)

Two skins from New South Wales, Australia.

Genus **Streptopelia** Bonaparte.

Streptopelia orientalis (Latham) (subsp. ?).

One juv. ♀, unknown locality.

Streptopelia lugens lugens (Rüppell).

(The Abyssinian Dusky Dove or Abyssinian Pink-breasted Turtle Dove.)

Four skins from the Tigre Province in S. Eritrea and on the Eritrea-Abyssinia frontier. Collected by Mr. W. T. Blanford in 1868.

¹ The name “Ring Dove” is now used for *Streptopelia decaocto* (Frivaldszky).

Streptopelia decaocto stoliczkae (Hume).

(The Kashgar Ring-Dove.)

1874. *Turtur Stoliczkae*, Hume, *Str. Feath.* II, p. 519. (Kashgar, E. Turkestan.)

Five skins from E. Turkestan—two from Kashgar and three from Yarkand. They give the following wing-length:—3♂♂ : 176-187 ; 2♀♀ : 169-175 mm. No. 26534 (Kashgar) is the Holotype and is in good condition. After Hume (1874), the type-specimen was re-described by Sharpe (1881, p. 117) and recently by Roonwal (1940, p. 444).

Streptopelia roseogrisea arabica (Neumann).

(The Arabian Pink-headed Dove.)

Four skins from Eritrea, collected by Mr. W. T. Blanford in 1868 and described by him (1870, p. 417) as *Turtur albiventris*. Wing—3♂♂ : 154-161 ; 1♀ : 155 mm.

Streptopelia semitorquata semitorquata (Rüppell).

(The Half-collared or Red-eyed Dove.)

Four skins from Eritrea and N. Abyssinia, collected by Mr. W. T. Blanford in 1868.

Streptopelia chinensis chinensis (Scopoli).

(The Chinese Spotted Dove.)

Three skins from E. China—two from Foochow and one from Amoy.

Streptopelia senegalensis senegalensis (Linnaeus).

(The Laughing Dove.)

Four skins from Eritrea, collected by Mr. W. T. Blanford in 1868.

Subfamily *MACROPYGIINAE*.Genus **Macropygia** Swainson.**Macropygia ruficeps malayana** Chasen & Kloss.

(The Little Malaya Cuckoo-Dove.)

One skin from the Wellesley Province, Malay Peninsula.

Macropygia ruficeps (Temminck) (subsp. ?).

One skin, unknown locality.

Macropygia phasianella phasianella (Temminck).

One ♀ from New South Wales, Australia.

Family CLARAVISIDAE.

Subfamily GEOPELINAÆ.

Genus **Geopelia** Swainson.**Geopelia striata maugeus** (Temminck).

Two skins from the Timor Island, E. Indies.

Geopelia striata placida Gould.

Four skins—one from the Northern Territory in Australia, two from “Australia”, and one without locality.

Geopelia striata tranquilla Gould.

Three skins from New South Wales, Australia.

Subfamily PHABINAE.

Genus **Oena** Swainson.**Oena capensis capensis** (Linnaeus).

(The Namaqua Dove.)

Ten skins—five from various places in Eritrea and five from Abyssinia—all collected by Mr. W. T. Blanford in 1868.

Genus **Turtur** Boddaert.**Turtur abyssinicus abyssinicus** (Sharpe).

(The Abyssinian Black-bellied Blue-spotted Wood-Dove.)

Six skins from the Anseba and Lebka Valleys and Samhar, all in Eritrea. Collected by Mr. W. T. Blanford in 1868. Blanford (1870, p. 417) wrongly described them as *Peristera afra* (Linn.). In the older literature the Spotted Wood-Doves of E. Africa were confused with one another, and the differences have been clarified only in comparatively recent years. Three similar-looking and co-existing species are involved, namely, *Turtur abyssinicus* (Sharpe), *T. afer* (Linnaeus) and *T. chalcospilos* (Wagler). The clarification of the differences is due to Erlanger (1901, p. 183), Sclater & Mackworth-Praed (1920, pp. 834-836) and Friedmann (1930, p. 239).

The Indian Museum specimens agree with the plumage characters of *T. abyssinicus* given by Sclater & Mackworth-Praed, the bill too, in dried skins, being horny-brown with black tips. Furthermore, Blanford (1870, p. 417), who collected these skins, gave the colour of the fresh bill as “deep purple”, whereas in *afer* it is yellow or orange. The back is brown instead of grey, but this, I think must be due to fading.

Genus **Chalcophaps** Gould.

Chalcophaps indica chrysochlora (Wagler).

Three skins from New South Wales, Australia.

Genus **Phaps** Selby.

Phaps chalcoptera chalcoptera (Latham).

(The Bronze-winged Pigeon.)

One ♀ from New South Wales, Australia.

Phaps chalcoptera (Latham) (subsp. ?).

Three skins from Australia.

Phaps elegans neglecta Mathews.

Three skins—two from New South Wales, and one juvenile from “Australia”

Genus **Ocyphaps** G. R. Gray.

Ocyphaps lophotes (Temminck).

Three skins—one from New South Wales in Australia, one from an unknown locality, and one juvenile bred in the Zoological Gardens, Calcutta.

Genus **Geophaps** G. R. Gray.

Geophaps scripta (Temminck) (subsp. ?).

Two skins, unknown locality.

Subfamily *GEOTRYGONINAE*.

Genus **Leucosarcia** Gould.

Leucosarcia melanoleuca (Latham).

(The Larger Wonga-Wonga.)

Two skins from New South Wales, Australia.

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